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AMERICAN MEN FOR THE AMERICAN NAVY.

ABOUT eleven years ago, when the United States steamer "Ashuelot" struck on the Lammock Rock and went to the bottom of the China Sea, carrying part of the crew down with her, public attention was drawn to the matter of the *personnel* of the navy. The "Ashuelot's" muster-roll became public property through the medium of the press and excited wide-spread and universally unfavorable comment at the navy's expense. It appeared that the "Ashuelot" had one hundred and eleven enlisted men, exclusive of marines, and that this small number of men represented no less than twenty different nationalities, only nineteen of the men being native-born Americans. At that time the interest of the public in the composition of a national vessel's crew did not take the form of the serious discussions that we have known in recent years looking towards the means of improving the position of the men, but consisted in the acceptance of the idea that a mob of foreign mercenaries was a fitting appendage to a navy whose ships had so degenerated as to become a target for sarcasm and jest on the part of the daily press. Accordingly many an editor, inland and metropolitan alike, proceeded to make merry with the facts in the case of the "Ashuelot" and to flood the funny columns of their newspapers with forced humor, in which the cosmopolitan character of the crowd that was gathered together in Jerusalem when the day of Pentecost was fully come, or the other crowd that constructed the tower of Babel, suffered by com-

parison with the alleged composition of the crew of an American war-ship.

The writer of this article was then serving on the Asiatic station in the "Monocacy," a sister ship of the "Ashuelot," and after reading numerous merry quips in the home papers at the expense of the crew of the latter vessel, was induced out of curiosity to investigate the nationality of his own vessel's crew, with the following discoveries:

There were one hundred and five men in the crew, not counting officers and marines, and they hailed from twenty-one different countries. There were twenty Americans, nineteen Chinese, eleven Germans, eleven Swedes, nine Irish, seven English, six Danes, four Scots, three Norwegians, two Finns, two Hollanders, two Belgians, and one each from Russia, Greece, Italy, Martinique, Siam, New Brunswick, Prince Edward Island, Canada, and Wales. About the only consolation to be derived from these figures is due to the Americans being more numerous by one than any other nationality, but this poor satisfaction was destroyed by the fact that one of the "Americans" was a full-blooded Chinaman, who having been born in San Francisco was, lawfully at least, a native-born American citizen. The most of the Chinese were cooks, stewards, and servants for the three messes of officers which had to be maintained on that small vessel, and their number could have been reduced at least one-half by some simpler arrangement as to officers' messes. They did not wear the naval uniform, and their appearance on the spar-deck at quarters, armed with boarding-pikes, introduced an element of opera-bouffe into the proceedings that was highly enjoyable to one who failed to see the national shame behind it. It was their function to repel boarders, and when this Mongolian horde rushed madly from one end of the deck to the other, brandishing their spears and yelling "hi-ya!" their long cues and light-blue garments fluttering in the breeze behind them, the remainder of the crew did well to flee to the paddle-boxes, whence one could contemplate the Oriental spectacle and think of Kublai Khan and his "ancestral voices prophesying war" in comparative safety.

The foreigners were in possession of most of the important ratings in the ship: the Canadian was the master-at-arms, the Welshman the chief boatswain's mate, the Greek the captain of the foretop, the man from Martinique—a coal-black negro, and the only one of that race in the ship—was the apothecary, and so on through the list. There was one genuine old Yankee man-of-war's-man in the crew, who had recently come out to the station in the flag-ship and who had been transferred to the "Monocacy," where he exercised his seaman-like qualities by being the ship's cook!

The two vessels above referred to do not furnish fair examples of American men-of-war's crews of that period, for the reason that they had been kept on that distant station for many years, seldom receiving

men from home, and consequently obliged to resort to foreign enlistment to maintain their complements. The men enlisted under such a system were good, bad, and indifferent, but the former class was not predominant from the fact that seafaring men out of employment in cities thousands of miles from their home ports are apt to be deserters, or to have left the ships in which they came out in some irregular manner due to their own faults; in other words, they are "beach-combers," and a very undesirable element to rely upon for national defense. After several years' existence of this method of recruiting, the natural result was that vacancies were occurring by expiration of enlistment every few days, which vacancies might be filled at once, or they might be allowed to accumulate for months until the ship visited some large port like Yokohama or Shanghai. Sometimes the ship's complement would be full and at other times as much as fifteen or twenty per cent. short; this, with the going of old men and the coming of new ones, like the changes in a sailors' boarding-house (as I believe the old "Monocacy" was regarded by many of the men), and the consequent changes in ratings and petty officers, produced a disorganizing effect upon the drills and efficiency of the crew that need not be described.

To show how completely the make-up of such a crew could be changed in a short time, I give the following data regarding the "Monocacy's" crew, tabulated by me only *three months* after the time that the composition of the crew was as given above. In the second case there were one hundred and seventeen enlisted men, exclusive of marines, of whom only seventeen, or less than fifteen per cent., were native-born Americans. There were also seventeen Chinese and seventeen Germans, the other countries represented being Sweden, by twelve; England, ten; Ireland, nine; Denmark, seven; Norway, five; Scotland, five; Holland, four; Italy, two; Belgium, two; New Zealand, Finland, Greece, Martinique, Siam, New Brunswick, Prince Edward Island, Canada, Australia, and Japan, one each. The Russian and the Welshman had disappeared from the rolls, but the number of nationalities is more than made up by the accession of an Australian, a Japanese, and a man from New Zealand.

A more representative crew, and one which probably shows a fair modern average of a home-enlisted American man-of-war's crew, was that of the "Enterprise" when fitting out for a cruise at the New York Navy-Yard towards the end of the year 1887. From a "nationality chart," made in my professional note-book at the time, I find that her crew, exclusive of officers and marines, numbered one hundred and thirty-eight, of whom seventy-three were native-born Americans. There were seventeen Irish, ten Japanese (officers' cooks, servants, etc.), six Germans, six Swedes, five Danes, five Nova Scotians, four Norwegians, three French, two Scotch, two Welsh, and one each from England, Canada, Australia, Holland, and Greece. A number of the

foreign-born members of this crew had served for many years in the United States navy, and, so far as sentiment goes, were Americans in faith if not in blood; this was noticeably the case with the Irish, several of the petty officers, among them the chief boatswain's mate, belonging to that race and having naval service to their credit dating back in some cases to the period of the war. This crew was sent on board from the receiving-ship at the same time that crews were being assembled for the "Nipsic" and "Marion," and as it was afterwards claimed that the "Enterprise's" crew was not picked in any way, it can safely be assumed that the *personnel* of the other crews was about the same. In the large force of men collected on the receiving-ship at that time were many of those who a few months later went into the "Trenton" and made the world ring with the cheers they uttered, in the very jaws of death, that dreadful day of the Samoan hurricane.

However, it is not enough for us to know that the crews of our war-ships are more than one-half native, as was the case with the "Enterprise," and presumably with the "Trenton." The *matériel* of our navy has completely changed in recent years, and, with only a few exceptions, our new ships have decided national characteristics; they are not only American in design and construction, but they carry with them that peculiar something in style and appearance that distinguishes them in foreign ports from the war-ships of all other countries, just as the Yankee dash and swing distinguishes the American abroad from the Frenchman, the Russian, or the Englishman. Rare specimens of the American naval officer, it is true, seek to disguise their nativity by the cultivation of a trans-Atlantic accent; but there appears no good reason why the whole service should follow suit by disguising our national vessels with foreign-tongued crews. Our ships, engines, and guns are thoroughly American, and it is high time that the crews were Americanized by so modifying present naval practices as to make life on a man-of-war possible and even attractive for our citizens. Theories must be laid aside and some practical method put in operation whereby an American youth can find in the navy of his country an opportunity for a career at least equal to that open to him in trade or in the mechanic arts.

A great deal of ink has been consumed by naval officers and others during the last few years in discussing ways and means for bettering the condition of the enlisted men of the navy and making the service more attractive for them, but every scheme that has appeared in print, and they are many, falls absurdly short of the mark. The pay of some of the chief petty officers has recently been raised to fifty dollars per month, and, to judge from the sentiments expressed by many of the naval essayists, this sum is considered princely enough to attract the very best talent to the service, in spite of the fact that the sailors' home is the best reward to look forward to when the man's life-work

is done. In connection with this matter of pay it is interesting to know that when the Brazilian authorities were recently fitting out the steamer "El Cid" in New York harbor for war purposes they offered seventy-five dollars per month for seamen gunners, and that a number of men who had been seamen gunners in the navy, after meeting and debating the question, agreed that one hundred and fifty dollars per month was the least they would accept.

Some of the naval writers gravely advance the theory that the removal of the only purely military element, the marines, from our ships would be a panacea for all evils, and that life would be worth living to those who remained, thus freed from contact with things military. Others take a more practical view of the matter, and propose schemes whereby apprentice boys can work their way up to become machinists, and eventually warranted or commissioned engineers, which is all very proper and very American so far as it goes, but it still leaves the larger element of the service, the seaman class, out in the cold, with no brighter prospect than the possibility of getting fifty dollars per month, or of becoming by some rare chance a warranted boatswain or gunner. These warrant officers' positions are honorable and well paid, but not sufficiently so to dazzle an American boy who can read, and who consequently knows that nine-tenths of the men who have become eminent in his country—statesmen, lawyers, merchants, generals, naval officers even—have risen by their own exertions from as humble walks in life as he himself may be in, and in a free competition which is open to him if he stays out of the navy, but sternly closed against him should he enter it under present conditions.

The essayists make much of the possibility of an apprentice boy or enlisted man becoming a warrant officer, but an investigation shows that this possibility is so remote as to be practically unworthy of consideration. The total number of boatswains and gunners in the United States navy is seventy-two, less than one per cent. of the number of enlisted men, which makes the chance of attaining such an office less than that of drawing a prize in any of the established lotteries. The official Navy Register shows that seventeen of the gunners and nine of the boatswains have been appointed during the last ten years, and shows, furthermore, that only five of the gunners and two of the boatswains were promoted from the ranks. Surely this prospect of gaining a warrant is a brilliant inducement for young men to remain in the service, and it may account for the fact stated by Lieutenant Fullam in the *Naval Institute*, that ninety per cent. of the apprentice boys leave the service.

One would expect that caste would characterize the military services of monarchical countries wherein orders of nobility are established on almost sacred bases, but examination shows that this is not the case, and that it is only in the navy of free America that an ambitious en-

listed man is forbidden to qualify himself for a commission and to get it when deserving.

In the British navy all warrant officers are obtained by promoting petty officers, and "Chief and other Gunners, Boatswains, and Carpenters of exemplary conduct, who may distinguish themselves by acts of gallantry and daring in the Service, shall be considered eligible to hold Commissions in Her Majesty's Fleet, in such other rank or position as the Admiralty may deem them, after undergoing an examination, worthy to receive and competent to fill." (Sec. 252, Queen's Regulations and Admiralty Instructions.)

"Seamen of the German navy who desire to qualify themselves for advancement to the corps of officers may, if they have shown special fitness, be recommended for promotion by the commandant of the seamen's division to which they belong. They are then required to send in the papers presented by applicants for admission as cadets, and in addition a certificate from a commanding officer (or merchant captain) with whom they have served, as to their conduct, acquirements, and capacity, and a statement that they have served twelve months at sea in a man-of-war or merchant vessel. The examination for admission must be held before the candidate is twenty years of age, and is governed by the same regulations as in the case of cadets. After the examination the career of seamen advanced to the corps of officers is the same as that of the officers themselves." (Professor J. R. Soley in Report on Foreign Systems of Naval Education, page 160.)

In the French navy the line officers are drawn from four sources: (1) the Naval School; (2) the Polytechnic School; (3) the warrant officers of the navy; (4) sea-captains. Warrant officers become such by promotion from the petty officer class, and are divided into three ranks or grades, called first masters, masters, and second masters (or first mates, mates, and second mates, as some writers translate the French titles). These three ranks exist in eight classes or specialties, chief among which are gunners, machinists, infantrymen, and sailors. The first masters are eligible for commissions as ensigns, subject to an established examination held in August of each year, and to aid and encourage them there is a preparatory school at Brest established especially for the benefit of the first masters who are candidates for ensign's commissions. First masters of the machinist class may in the same manner enter the lowest commissioned grade of the engineers.

It is needless to lengthen this article with further data like the foregoing; suffice it to say that, so far as the writer has been able to discover, the United States navy is the only one of any importance in which some established method does not exist whereby a deserving enlisted man may obtain a commission. Our ambitious young seamen must therefore, if hopeful for a sea career, seek that recognition under a foreign flag which their own "free" country denies them.

It is well known that the United States army is much better and more favorably known to the people of the country than is the navy, and this is doubtless due largely to the fact that the law makes it possible for young men to obtain commissions in the army directly from civil life: more than this, it is possible for deserving men to be advanced from the ranks, and we read each year of a number of capable non-commissioned officers exchanging their chevrons for shoulder-straps. This serves as an incentive for young men of intelligence and education to enter the ranks of the army, to the great benefit of the tone and *esprit* of the ranks, and, furthermore, their passage from the ranks to the grades of commissioned officer serves a still better purpose by infusing into the body of commissioned officers the leaven necessary to neutralize a false idea of exclusiveness and aristocracy that is bound to develop to some extent in a corps of youths under training for commissions, who, in their immature wisdom, are apt to be dazzled by the sureness of their prospects and to forget or overlook the democratic principles which governed their original selection for the honorable career they enjoy, or even in some cases to look with contempt upon the very elements of society whence they sprung.

The writer does not wish to disparage either of the government schools for the training of officers, especially as he is a graduate of one of them, believing that the bad results of their training sometimes observable are due to personal idiosyncrasies that no amount of training can eliminate rather than to any defects in the methods of the schools themselves. The general results of the training of both schools are excellent, but it does not follow from this that they should be the only sources of supply for officers. It is stated that only sixty per cent. of the line officers of the army came from West Point, yet this fact does not appear to detract from the general ability and efficiency of the line officers as a body, nor does the history of the army show that officers taken from the ranks or from civil life have not shown themselves quite as competent in high positions as the graduates themselves.

Although now closed to the civilian and the seamen, our navy has not always been so, and some of the brightest pages of its history are made brighter by the names of men trained for the sea in merchant ships, and who by sheer pluck and ability worked their way aft from the forecastle, "appearing on the quarter-deck with the material evidences of the struggle upon their muscular hands." In our old wars this class gave to the navy such names as John Paul Jones, Nicholas Biddle, James Nicholson, Isaac Hull, Edward Preble, William Bainbridge, Thomas Truxton, and Charles Stewart. In the great Civil War this class was again found ready to answer their country's cry for help, and many of the much maligned "mustangs," as they are called to this day by an element in the service that has failed to acquire gentility with all the training lavished upon it, showed themselves to be as competent

to command, as courageous and resourceful in battle, and as presentable in polite society as any of the regulars, while their tractability under discipline and military restraint was better in proportion to their numbers, as shown by the records of naval courts-martial during the period that there were a considerable number of volunteer officers in service.

To Americanize the service and make it sufficiently attractive for our native-born citizens to take it up as their career in life several propositions must be enacted into laws and put in operation; chief among which may be cited the following:

1. The possibility of enlisted men becoming commissioned officers.

2. An increase in the number of warrant officers, and restricting appointments to this class to the petty officers of the navy.

3. Increased responsibility and dignity of position conferred upon petty officers on board ship.

4. A retired list, or civil employment on shore, for enlisted men after long and faithful service.

5. More attention given to the comfort of enlisted men in the design of ships and in the administrative details of life on board them.

Regarding the first proposal, we would do well to adopt either the French or the English system of advancing warrant officers, previously described, preferably the French system. The details of this system when put in operation would involve certain restrictions as to age, length of service, conduct record, etc., and promotion would depend upon passing a professional examination. As is the case in France, opportunity should be given candidates to fit themselves for the theoretical part of the examination by the establishment of a preparatory school at the Naval Academy or at one of the navy-yards. A certain proportion of the vacancies occurring in the rank of ensign each year should be regarded as belonging to this class of candidates, and the examination of warrant officers should be held earlier in the year than July 1, in order that graduates of the Academy could be assigned to such of these vacancies as remained unfilled after the successful warrant-officer candidates had been commissioned.

In connection with this subject of advancing warrant officers to commissioned rank, consideration for the engineering force should not be lost sight of by allowing it to be overshadowed by the larger and more prominent seaman class. A grade of warrant-officer-machinist should be created for the artificer branch of the service, into which enlisted machinists could be advanced under rules and regulations similar to those practiced in advancing petty officers of the seaman class to the dignity of warrants. These warranted machinists should be on an absolute equality with the other warrant officers in regard to pay, quarters, uniform, etc., and equally with them should they have the privilege of competing for commissions in their own corps. The

number of such warranted machinists could be established by making it bear the same ratio to the number of commissioned engineers that the number of seamen warrant officers bears to the number of commissioned line officers, and the number of them entitled to commissions annually should bear a similar ratio to the number of line warrant officers advanced to ensigns.

The number of warrant officers in our navy compared with the number of commissioned officers is proportionately much less than in some of the other well-organized navies, and by increasing the number by advancing worthy petty officers we would not only be increasing the inducements for enlisted service but would be following the example of successful naval organizations as well. It cannot be denied that many of the duties now falling upon commissioned officers could be performed as well, if not better, by warrant officers, whose training has been practical rather than theoretical, and this being the case, it would be in the interest of efficiency as well as economy to gradually replace many of the commissioned officers now in the service by the less ornamental but more useful warrant officer. An editorial recently published in the nautical journal called *Seaboard* dealt extensively with the training of seamen gunners in the United States navy, and accounted for the few who remained in the service by showing how almost impossible it is for them to even hope for gunner's warrants. So pertinent to the subject under discussion is one part of the editorial, that I quote it as follows:

"In his report for 1891 the chief of the bureau of ordnance, and Commander O'Neil, of the Washington Navy-Yard, bear like testimony to the character and ability of these men. Is it any wonder that such men leave a service in which they are denied the privileges which Americans have been taught to believe they might aspire to? Is it to be expected that men of such attainments will be content to remain in a blue shirt forever?

"The reason for keeping these men down is not hard to see. It lies in the enormously disproportionate number of line officers in the service. They must be given employment, and so we find them on board ships filling positions which could be better filled by many of these men, who now leave the service because, under present conditions, as Commander Jewell says, they can earn a better and a more respectable living on shore.

"We should hardly expect to find a country of free people like our own behind monarchical countries in the recognition of its competent seamen, and yet if we look at England we there find such a radical difference in the method of running ships that we have to stop and ask ourselves if this is really a free country. What we find only goes to emphasize what Captain Patterson said on the subject of naval aristocracy.

"There are in the British navy fifteen hundred and ninety-two line officers of all ranks above that of midshipman, and eight hundred and seventy-eight gunners and boatswains. In other words, Great Britain has two-thirds as many warrant officers as she has line officers. In the United States navy there are seven hundred and twenty-seven line officers and only seventy-two gunners and boatswains. Or we have more than ten line officers to each gunner and boatswain, while England has only three to two.

"The following tabular review will give a better idea of how it stands in the two countries:

	England.	United States.
Number of line officers	1592	727
Number of gunners and boatswains	878	72
Total	2470	799

"Now, if our officers be distributed in accordance with the English plan, we would have,—

Line officers	514
Gunners and boatswains	285

"In other words, we should have four times as many gunners and boatswains as we now have, and only seventy per cent. as many line officers.

"It is notorious that our cruisers are not only top-heavy by reason of their construction and armament, but also on account of the large number of officers on them. This is especially so of the small ships. Take our ships of the 'Yorktown' class; each of them has eight line officers on board, but no gunners; the identical ships in the English navy have just half as many line officers, and two gunners each. Their gunboats of about eleven hundred tons, corresponding to our 'Machias,' have four line officers and two gunners; ours have seven line officers and neither a gunner nor a boatswain. Those of the 'Petrel' class have three line officers and one gunner, while the 'Petrel' has no less than eight line officers. The 'Detroit' has eight line officers; the similiar ships in the English navy have four. Search the British navy list and it will be impossible to find a ship without a gunner, and some of the large battle-ships will be found to have as many as five gunners and boatswains as a regular complement, and sometimes two or three additional ones for special duties.

"It would be well for Congress to look into this matter and see whether it is either economical or conducive to the best interests of the government to maintain so many highly scientific officers in employments which give them no scope for using their acquirements, or whether better results might not be obtained by increasing the number of warrant officers of the gunner and boatswain grade, and making a corresponding reduction in the number of line officers."

In regard to increasing the responsibilities of petty officers on board ship, it is presupposed that men are not made petty officers until they have shown aptitude for controlling or commanding armed men; machinery must be cleaned to keep it in working order, brightwork must be polished and decks must be holystoned, but proficiency in these tasks ought not to constitute the chief recommendation of a seaman for rating as a leading petty officer, as I understand is frequently the case at present. The chief object of a war-vessel's existence is to fight, and, this being the case, the leaders among the men should be leaders of fighting men, like the sergeants in the army, rather than like the foremen of gangs of street laborers. They should be competent to drill their gun's crew or a company of men armed as infantry as well as the army sergeant can drill his squad, and without supervision from an officer. Lieutenant Fullam, whose long experience as a watch officer makes him well able to judge of our present faults, complains in the *Naval Institute* that the petty officer is now a nonenity, and that the commissioned officer "must follow up the afterguard-sweeper to see that he gets the sand out of the corners, and superintend everything day and night, trusting nothing to the petty officer. His time and energies are wasted in doing a petty officer's duties. The petty officer, relieved of his proper functions, becomes one among the men, and the latter respect and obey officers and petty officers accordingly." By trusting the petty officer with the administrative details of ship's work and drills, and allowing him to attend to his duties without constant "nagging" and following up, we may hope to get men into these ratings who will command the obedience of their subordinates, value their positions, respect themselves, and strive for further advancement.

The proposal to establish a retired list for the enlisted men of the navy has been much discussed, and has no opponents in the service so far as I have ever heard. Existing statute law provides that men who have served thirty years in the army or marine corps, or both, may be retired with three-fourths of the pay and allowances allowed them by law in the grades which they held when retired, including re-enlistment and continuous-service pay. The application of this law to the navy would be simply an act of justice to the enlisted men, and its extension to embrace the navy, as well as the army and marine corps, would be satisfactory to all concerned and the simplest way of effecting the desired object. It would certainly be a powerful incentive for the encouragement of enlisted men to good behavior and continuous service.

Without such a retired list, many of the benefits of one could be conferred upon enlisted men by the enactment of laws and regulations giving to such men, after a certain number of years of continuous service, permanent civil employment under the Department. Such places as shipkeepers, watchmen, messengers, and many others, at the navy-yards should be reserved for men-of-war's-men, to assure them of light

employment and satisfactory pay in their old age as a reward for long and faithful service. We would do well to follow the example of many foreign countries and reserve for old soldiers and sailors certain classes of positions in the civil service at large, irrespective of the governmental departments under which the positions naturally come.

Although not directly bearing upon the subject of this paper, it may not be out of place here to suggest that the principle above advocated might well be extended to the retired list of officers. Many a rear-admiral retired at sixty-two years of age is at the high tide of his physical and mental vigor, and, with his knowledge and experience in international affairs, should make a model ambassador or minister to a foreign country. Probably one-half of the officers of all grades on the retired list of the navy are capable of doing excellent work on shore, even though physically incapacitated for duty at sea, and it would seem both sensible and economical to assign them to duty in the various civil employments under the government. What better training for a consulship, for example, could a man have than going about the world for years in the capacity of a naval officer? I may be getting near the danger-line as respects the prerogatives of political patronage, but, while suggesting the above, it may be well to go farther and ask why the government should not save the large pensions now paid to hundreds of retired army and navy officers by assigning them to such positions as United States consuls, collectors of internal revenue, United States marshals, pension agents, postmasters of cities even? Besides saving hundreds of thousands of dollars annually, this scheme if put in operation would greatly lessen the evils of the quadrennial scramble for office, that now reflects anything but credit upon our people and inflicts untold annoyance upon the chief executive and the members of his cabinet.

The matter of the comfort of the men, and sometimes of the officers, on board ship is not given sufficient consideration by the designers. Of course a war-ship *must* fulfill several important conditions as to speed, coal endurance, weight of battery, etc., but the comfort of the men who have to handle and fight the ship, a matter that directly affects the efficiency of the whole fabric, is too often made subordinate to everything else, or is even not considered at all. Officers familiar with ship-life know that a crew that is comfortably messed and berthed is a good crew, and that one in which the men have to swing two or three deep and to "wolf" their food out of tin pans on the deck is an uncomfortable, discontented, and poor one, which no amount of drill and training can make really efficient. A step towards remedying this would be to require at least one sea cruise from the naval constructors before they undertake the design of ships, as familiarity with the details of ship-life would give them new ideas as to ship requirements. There is an office on board a modern war-vessel for a naval constructor, as it

is agreed on all sides that the executive officers and chief engineers have now all they can possibly do well in attending to their own legitimate duties without having to spend a considerable portion of their time in the bottom of the ship inspecting the hull. The constructors design the hulls, and it looks quite proper that they should supervise them in service, which duty could be carried out by an assistant naval constructor detailed to each ship for the purpose.

Connected with the design of the quarters on board ship is the mode of life allowed the crew in those quarters. The hours for meals, hours for drills and ship-work, personal peculiarities of officers in charge of men, are all small things in themselves, but, with many other small things not mentioned, all go to make up the important question of content or discontent of the crew. In most, if not all, of the ships in which the writer has sailed the meals for the crew were served at 8 A.M., 12 noon, and 4 P.M., as these hours seemed to conflict less with the desired routine than any others. As ship's work at sea goes on at night as well as in the daytime, the hardship of the above arrangement is obvious; especially hard does it fall upon the engineers' force, which has to perform while on watch the hardest kind of hard labor. The firemen having the morning watch, for example, have to wash up and change their clothes after being relieved, and therefore cannot get breakfast much before 8.30 A.M.; this same watch goes on again at 4 P.M., and must consequently get supper at 3.30, thus obliging the men to eat all their daily food within a space of seven hours and to fast at hard labor for seventeen. Indigestion and dyspepsia follow as natural results of such an unnatural regimen; the men become irritable, surly, and insubordinate, thus bringing punishment and consequent discontent upon themselves, until they finally desert or else become victims upon whom young officers gain experience in naval courts-martial.

I believe that the establishing of a system of advancement similar to the one outlined in the foregoing pages, making it possible for a competent enlisted man to rise through the grades of petty officer and warrant officer to a commission, will do much towards Americanizing our navy, while the dignifying of the petty officer's position, by adding to its authority and responsibility, will make the service such that our countrymen of modest ambitions can find in it a field wide enough and satisfactory enough for the pursuit of a respectable and honorable career. That all of the officers of the navy will agree with the sentiments herein expressed I cannot hope, but I know that many will. To those who differ from these views (and the difference will exist mainly in the objection to allowing enlisted men to work upward to the officer's estate) I would say that, after all is said and done, the man in the blue shirt, with all his faults, is still the type of what the naval officer must rely upon for his success; he is the bone and sinew of the

service, the one who does the hard work and bears the hard knocks in silence, whose name is not known to fame, but whose strong arms and brave heart help the officer onward and upward to fame and greatness. Why should he not be allowed at least a chance to try for the honors he so cheerfully helps others to gain? "Is the hand unworthy because it is not the eye?"

Macaulay, in describing the condition of the British navy at the time that it was fighting for the dominion of the narrow seas that washed about its island home, finds much fault with the inexperienced commanders who held high positions in the service by no other right than noble birth or influence at court. After ascribing much of the failure and inefficiency in the service at that time to the presence of these "gentlemen captains," as they were called, he adds, "Mingled with them were to be found, happily for our country, naval commanders of a very different description,—men whose whole life had been passed on the deep, and who had worked and fought their way from the lowest offices of the forecastle to rank and distinction. One of the most eminent of these officers was Sir Christopher Mings, who entered the service as a cabin-boy, who fell fighting bravely against the Dutch, and whom his crew, weeping and vowing vengeance, carried to the grave. From him sprang, by a singular kind of descent, a line of valiant and expert sailors. His cabin-boy was Sir John Narborough, and the cabin-boy of Sir John Narborough was Sir Cloudesley Shovel. To the strong natural sense and dauntless courage of this class of men England owes a debt of gratitude never to be forgotten. It was by such resolute hearts that, in spite of much maladministration, and in spite of the blunders and treasons of more courtly admirals, our coasts were protected and the reputation of our flag upheld during many gloomy and perilous years."

Macaulay's dismal picture of the British navy under the rule of the "gentlemen captains" cannot fairly be applied to our navy in this present year of grace, for it cannot be denied that our officers of Naval Academy training are, as a rule, brave, skillful, and competent. Being, however, of identically the same training, their minds, methods, and ideas run in very much the same groove, and having no element in competition with them to jar them loose from preconceived notions and moss-covered traditions, they are very slow to get out of that groove or to adopt new ideas. It was said of old that "A little leaven leaveneth the whole lump," and on this principle we could but look for good results if there were introduced into the corps of naval officers a few men whose training had been different from that common to the majority. As to the character and competence of the men so introduced, it is sufficient to say that if a man can work his way against all the obstacles that are sure to lie in his path from the position of an apprentice boy on the forecastle to that of commander on

the quarter-deck, we may feel sure that he will possess that "strong natural sense and dauntless courage" that was characteristic of a Sir Cloudesley Shovel, not to mention John Paul Jones, Isaac Hull, and Charles Stewart, who upheld the honor of our flag during years as perilous and gloomy as any through which the British navy has passed.

A few words as to the proper source of supply of seamen for our new navy will not now be out of place. There is a popular belief throughout the country that men who dwell along the sea-coasts constitute the only element fit for service in the navy, a belief that was essentially correct so long as sails were the motive-power of war-ships, but is now sadly out of date. Although sails have now passed away for naval purposes, there is still a powerful faction in the navy that clings to this old idea, and by giving it publicity serves to discourage the very element that we most need from entering the service. Only a few months ago it was stated in a letter published in this magazine that the proper element to draw upon for sailors to man ships in case of war "is found among fishermen and stevedores." It is high time that this idea is exploded; fishermen and stevedores may have been excellent material for men-of-war's-men in the days of sailing-frigates, but that day is now done. The man on shipboard now, whatever his rating may be, who can weld the broken ends of an iron bar is infinitely more useful to the ship than is the man who can splice a rope. In dealing with this same subject of seamen for a modern navy, that eminent French authority, the late M. Gabriel Charmes, wrote as follows:

"Even if born on a sailing-ship, a native of the coast would not any the more be fitted for handling the engines than any ordinary conscript. The complicated engines on board a modern vessel would puzzle him quite as much; he would be just as awkward and just as difficult to teach. To have breathed the sea-air from his earliest youth would avail him nothing. Long cruises, interminable voyages which could only be endured by those accustomed from youth upward to live between sea and sky, have given place to a new style of navigation, exacting more intelligence than strength or perseverance. In this way the best seamen are as often secured by conscription as by maritime inscription, or rather a great many more are secured by the former than by the latter. The townsman makes a better gunner than the fisherman does, and is still better if he happen to be a workman or a mechanic."

When it is understood by the public that the mill-men of Pittsburg and Birmingham or the engine-builders of Detroit and Milwaukee are wanted in the navy in preference to the fishermen of New Bedford and Marblehead, we may hope to get men who will not be entirely fish out of water in the complicated compartments of a modern

war-vessel, and who, under the direction of a gun-captain who is a machinist rather than a sailor, will not ruin the fine mechanism of a gun mount by scrubbing it with sand and canvas "to make it shine." No disrespect is meant in these remarks to the seafaring class of our citizens, which class under a different order of things for a long period maintained the honor of our flag at sea. Such communities as that of Marblehead, for instance, which brave little town once contained six hundred widows as a result of the American Revolution, and furnished almost all of the men of the frigate "Constitution" during her glorious career in the war of 1812, may well rest on their laurels and accept the truth that the service has so changed as to need a different order of men to-day than they can supply.

F. M. Bennett,
Passed Assistant Engineer U.S.N.; Member of the Society of Sons of the American Revolution.

A SOLILOQUY.

DEDICATED TO FIFTY COLONELS, MORE OR LESS, IN THE UNITED STATES ARMY.

PART I.

BEFORE THE NOMINATION.

TWINKLE, twinkle, pretty star,
How I wonder whose you are,
Shining now in Grover's care
Like a diamond solitaire.

Twinkle, twinkle, pretty star,
Perhaps so near, perhaps so far,
How much longer must I moulder
Ere you fall upon my shoulder?

Would you twinkle, pretty star,
Where my ancient eagles are?
Hurry up, or, sure as fate,
You will find it is too late.

In something little like a score
My years will number sixty-four.
Too old for Venus or for Mars,
Or ought but slippers—oh, my stars.

PART II.

AFTER THE NOMINATION.

Twinkle, twinkle, simple star,
With Otis, Carlin, Wheaton, Carr,
With son of Japhet, Shem, or Ham,
I do not really care a—clam.

Not for me a bearskin coat or
Two at St. Paul, Minnesota,
Not for me be it to risk, oh,
Cough and chill at San Francisco,

Not for me to try manœuvre
For command at dull Vancouver,
Be left at Denver in the lurch
Where high and dry are State and Church.

Nor through the torrid heat to groan
That scorches dusty San Antone,
Nor from the bluffs of Omaha
To sigh for Broadway and Nassau.

Twinkle, twinkle, simple star,
Eagle, leaves, and bars and bar
Have I had, and they will do
For one of not quite six feet two.

Twinkle, twinkle, simple star,
Give me a book, a good cigar,
And whether here or there you twinkle
Matters not a periwinkle.

Why strike my head against the stars
And mingle with Department jars?
Then scintillate just as you please,
I remain content with these:

Wine and slippers, book and smoke,
Now a sermon, now a joke,
No A.G.'s nor I.G.'s nor J.A.G.'s shall mar
The bliss I have without the star.

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ORIGIN AND DEVELOPMENTS OF STEAM NAVIGATION.

(Continued from page 89.)

1796.—The tenth volume of the "Repository of Arts" contains a description of the fire-ship of Edward Thomason, which was laid before the Lords of the Admiralty, in England, in 1796. It had vertical wheels at the sides, operated on by steam-engines, and was intended to possess the power of moving given distances in all directions according to the intentions of the director, so that, *without any person on board*, it would conduct itself into an enemy's port, and by *clock-work*, at the given moment, explode the combustible. This seems to have been the pioneer of the modern torpedo-boat, which is moved from the shore by electricity.

The *seventh* successful steamboat was tried in 1796, in the United States, the invention of John Fitch after his return from France. The experiment was tried under the patronage of Robert H. Livingston, as certified to by John R. Hutchings, General Anthony Lamb, and William H. Westlock. It was made with a *screw-propeller*, the vessel used was a yawl, about eighteen feet in length and having six feet beam, and steered at the bow with an oar. The boiler was a ten-gallon iron pot, with a thick plank lid firmly fastened to it by an iron bar placed transversely. The cylinders were of wood, barrel-shaped on the outside, straight on the inside, and strongly hooped. Steam was raised sufficiently high to send the boat once or twice around the pond, when more water was needed to generate steam for a new start. The time was the summer of 1796, and the scene of the experiment was "*The Collect*," a fresh-water pond in New York City, near what is now called Canal Street. The pond has been drained, and its site, covered with houses, is now in the heart of the city.

1797.—The *eighth* United States steamboat was built by Samuel Morey, assisted by the Rev. Burgess Allison, of Bordentown, New Jersey. It was constructed with paddle-wheels at the sides, in the same manner as Fulton's steamboat subsequently, and was propelled from Bordentown to Philadelphia in the summer of 1797, and publicly exhibited. In this year, also, Chancellor Livingston built a boat on the Hudson River, and obtained exclusive privilege from the New

York Legislature for one year, on condition that he produced a vessel impelled by steam *three miles an hour*, but which he was unable to effect. He was associated in this enterprise with a person of the name of Nisbett, a native of England. Brunel, afterwards distinguished as the engineer of the Thames Tunnel, acted as their engineer.

Morse, in his "Gazetteer," published in 1797, under the head of Territory, and referring to the Northwest Territory, says that he thinks "*it is probable steamboats will be found of infinite service in all our extensive river navigation.*"

In 1797 an experiment in canal steam navigation was made in the neighborhood of Liverpool, and the *Monthly Magazine* for July of that year says, "Lately the Newton-Common, in Lancashire, a vessel heavily laded with copper slag passed along the Sankey Canal without the aid of haulers or rowers, the oars performing eighteen strokes a minute by the application of *steam* only! After a course of ten miles the vessel returned the same evening by the same means to St. Helen's, whence she had set out. This ingenious discovery by the original form and motion of the oars may be ranked among the most useful of modern inventions, and in particular promises the highest benefits to inland navigation."

1798.—The next vessel moved by steam, in the United States, was a model boat, about three feet long, built by John Fitch, at Bardstown, in Kentucky, in the summer of 1798, and tried upon the creek near that town.

The success of the steamboat was assured by the adoption of vertical paddle-wheels over the sides, though later inventions have so modified the hulls and engines, that the screw placed at the stern has in a general measure supplanted the side wheels.

In 1815, Nicholas J. Roosevelt in a petition to the New Jersey Legislature asserts, with the modesty and manly firmness of honesty, that "he is the true and original inventor and discoverer of steamboats with vertical wheels."

In an affadavit attached to his petition he says,—

"In or about the year 1781 or 1782" he resided with Joseph Vostenhandt, about four miles above Esopus, on the North River, in New York, and that he did there make, rig, and put in operation on a small brook near Vostenhandt's house, "a small wooden model of a boat with vertical wheels over the sides," each wheel having four arms or paddles made of shingles, and that "these wheels being acted on by hickory or whalebone springs propelled the model boat through the water by the agency of a tight cord passed between the wheels, and being reacted on by the springs."

In 1798, in conjunction with Chancellor Livingston and John Stevens, he entered into an agreement to build a boat on joint account, for which the engines were to be constructed at Second River by

Roosevelt, while the propelling power was to be on the plan of the chancellor's.

Steam was applied to the machinery about the middle of the year 1798 unsuccessfully. Improvements were made in it until in October Roosevelt wrote the chancellor an account of a trial trip on which the speed attained was equivalent to about three miles in still water, though with wind and tide, the Spanish minister, who was on board and highly elated, estimated the actual speed at double that amount.

The month previous to this trial, on the 6th of September, 1798, Roosevelt wrote the chancellor in this connection, after referring to a change in the plan, a letter in which he says, "I would recommend that we throw two wheels of wood over the sides, fastened to the axis of the flys [fly-wheels] with eight arms or paddles; that part which enters the water of sheet iron to shift according to the power they require either deeper in the water, or otherwise, and that we navigate the vessel with these until we can procure an engine of the proper size, which I think ought not to be less than 24-inch cylinder." On the 16th of the same month he again wrote the chancellor, "I hope to hear your opinion of throwing wheels over the sides," and the chancellor answers, "I say nothing on the subject of wheels over the sides, as I am perfectly convinced from variety of experiments of the superiority of those we have adopted."

Their apparatus was a system of paddles, resembling a horizonta chain-pump, set in motion by an engine of Watt's construction. W know that such a plan, if inferior to paddle-wheels, might answer the purpose; it, however, failed, in consequence of the weakness of the vessel, which, changing its figure, dislocated the parts of the engine. Their joint proceedings were interrupted by the appointment of Chancellor Livingston to represent the American government in France. Stevens, however, undiscouraged, continued his experiments at Hoboken, while Livingston carried to Europe the most sanguine expectations of success. Previous to these attempts, Mr. Nicholas R. Roosevelt and R. R. Livingston had made some experiments in steam navigation, the detailed account of which has not been preserved.[1]

1800.—Messrs. Hunter and Dickinson are said to have taken out a patent in England in 1800 for propelling vessels by steam, which was tried on the Thames, in January, 1801. The English *Monthly Magazine* contains an account of this performance, "as very creditable to them, and as exceeding everything before accomplished;" and says that "the vessel was moved at the rate of three miles an hour through the water."

The newspapers of 1801 announce that on the 1st of July "an

[1] A detailed account of these experiments can be found in a pamphlet entitled "A Lost Chapter in the History of the Steamboat," by J. H. B. Lathrop. Published by the Maryland Historical Society, Baltimore, March, 1871.

experiment took place on the river Thames for the purpose of working a barge or any other heavy craft against the tide by means of a steam-engine on a very simple construction. The moment the engine was set to work the barge was brought about, answering her helm quickly, and she made way against a strong current, at the rate of two and a half miles an hour."

1800.—Edward Shorter patented a screw-propeller in 1800, which was successfully tried by *manual* power, to move vessels of war, in 1802.

Mr. Samuel Brown had a boat built expressly for being propelled by a gas vacuum-engine, of which he was the inventor, made to drive a two-bladed submerged propeller, in the bow of the boat, by which a speed of from six to seven miles an hour was obtained.

CHAPTER II.—1800–1819.

Wm. Symington's Steam-Tug, 1802.—Robert Fulton's French Experiments, 1802–4.—Oliver Evans, 1802–4.—Stevens, 1804.—The Clermont, Fulton's first successful Steamboat, 1807.—Robert L. Stevens, 1808.—Jonathan Nichols, 1807–9.—Inland Steam Navigation, United States, 1809.—John Cox Stevens's Sea-Voyage, 1809.—Robert Fulton's Patent, 1811.—Rapid Traveling in Steamboats, 1811.—First Steamboat on the Western Waters of the United States, 1811.—Fulton's Steamboats, 1812.—Steamboat on the Delaware, 1812.—Steamboats between Philadelphia and New York, 1818.—Hezekiah Bliss, 1810–19.—The Comet, and Henry Bell, 1812.—The Elizabeth, 1813.—The Clyde, and Glasgow, each 1813.—First Steamboat on the St. Lawrence, 1813.—Robert Fulton's Patent, 1813.—First Steamboat in India, 1810, 1819, 1821.—Early English Steamboats, 1813–15.—Loss by Wreck of Steamers in War, 1812–14.—The Margery *et al.*, 1814.—The Demologos, or Fulton the First, the First War Steamship, 1814.—Steamers in England in 1814.—The Argyle, or Thames, 1815.—Steam Navigation adopted in Russia, 1815–16.—Trevatheniet's Patents on Screw-Propeller in England, 1815.—Roosevelt claims the Invention of Paddle-Wheels, 1814–16.—Liverpool Steam Ferry-Boat, 1816.—The Majestic first to cross the English Channel, 1816.—First Line of Steamboats, New York to New London, 1816.—Iona Morgan's Steamboat in Maine, 1816.—First Steamboat commanded by Cornelius Vanderbilt, 1817.—First Steam Tow-Boat, 1816.—The Firefly, 1817.—First Steamboat on the Rhine, 1817.—The Manifest of First Steamboat to Boston, 1817.—First Steamboat on Lake Erie, 1818.—Baltimore and Philadelphia Steamboat, 1813–15.—The first English Steam-Tug, 1818.—Steamers between the Mersey and Clyde, 1819.—First Steamer, Liverpool and Ireland, 1819.

1802.—In 1802, William Symington, who had been associated with Millar and Taylor in the experiments at Dalswinton, under the patronage of Lord Dundas, of Kerse, an extensive proprietor in the Forth and Clyde Canal, constructed a steam-vessel for the purpose of superseding the use of horses in towing vessels along the canal. His

narrative of the experiment, the truthfulness of which has been confirmed by others, is as follows:

"Having previously made various experiments, in March, 1802, at Lock Twenty-two, Lord Dundas, the great patron and steamboat promoter, along with Archibald Spiers, Esq., of Elderslee, and several gentlemen of their acquaintances being on board, the steamboat took in drag two loaded vessels, the 'Active' and 'Euphemia,' of Grangemouth, Gow and Elspine, masters, each upwards of *seventy tons* burden, and with great ease carried them through the long reach of the Forth and Clyde Canal at Port Dundas, a distance of nineteen and a half miles, in six hours, although the whole time it blew a very strong breeze right ahead of us; so much that no other vessel could move to windward in the canal that day but those we had in tow."

When unimpeded by having other boats in tow, this vessel went steadily at the rate of six miles an hour, and may be considered to have been a complete success. Her cylinder had a diameter of twenty-two inches, and her piston a stroke of four feet. She had her paddle-wheel astern, and steering apparatus in front. Mr. Symington proposed to apply side-wheels to this boat, but it was feared they would injure the banks of the canal, and he was induced to substitute a stern-wheel.

The "Charlotte Dundas," as this vessel was called, is said to have cost three thousand pounds. If not the first practical English steamboat, she was certainly the first tug- or tow-boat ever built, and her performance, says Scott Russell, writing in 1841, "appears to be about as great as any since accomplished by the many boats which on the same canal have attempted the same duty. So simple was the machinery that it might have been at work to this day with merely ordinary repairs."[2]

1802.—Robert Fulton, with whose name the history of steam navigation is inseparably connected, the son of a poor Irish laborer who emigrated to America, born in Pennsylvania in 1765, was in 1802 spending the winter at Paris, where he made a model, and wrote a description of a small steamboat with paddle-wheels. He also wrote the following letter to a friend, showing he was at that early day engaged in the attempt to move vessels by mechanical power.

"PARIS, the 20th of September, 1802.

"TO MR. FULNER SKIPWITH:

"SIR,—The expense of a patent in France is 300 livres for three years, 800 ditto for ten years, and 1500 ditto for fifteen years; there can be no difficulty in obtaining a patent for the mode of propelling a boat which you have shown me; but if the author of the model wishes to be assured of the merits of his invention before he goes to the expense of a patent, I advise him to make the model of a boat in which he can place a clock spring which will give about eight revolutions; he can then

[2] The machinery of this boat was exhibited at an exhibition in London a few years since.

combine the movements so as to try oars, paddles, and the leaves which he proposes; if he finds that the leaves drive the boat a greater distance in the same time than either oars or paddles, they consequently are a better application of power. About eight years ago the Earl of Stanhope tried an experiment on similar leaves in Greenland Dock, London, but without success. I have also tried experiments on similar leaves, wheels, oars, paddles, and flyers similar to those of a smoke-jack, and found oars to be the best. The velocity with which a boat moves is in proportion as the sum of the surfaces of the oars, paddles, leaves, or other machine is to the bow of the boat presented to the water, and in proportion to the power with which such machinery is put in motion; hence, if the sum of the surfaces of the oars is equal to the sum of the surfaces of the leaves, and they pass through similar curves in the same time, the effect must be the same; but oars have their advantage, they return through air to make a second stroke, and hence create very little resistance; whereas the leaves return through water, and add considerably to the resistance, which resistance is increased as the velocity of the boat is augmented: no kind of machinery can create power; all that can be done is to apply the manual or other power to the best advantage. If the author of the model is fond of mechanics, he will be much amused, and not lose his time, by trying the experiments in the manner I propose, and this perhaps is the most prudent measure, before a patent is taken.

"I am, Sir, with much respect, yours,
"ROBERT FULTON."

1803.—About the same time, in connection with Chancellor Livingston, then the American minister at the French court, he commenced the construction of an experimental steamboat on a large scale, which was launched in the spring of 1803, on the Seine, below Paris, and the steam-engine and boilers put on board. He had, however, miscalculated the strength of his vessel, and when the weight of the machinery was placed in the centre she broke through the middle and sunk, and when raised was found to be unworthy of repairs. He therefore built a new hull to receive the machinery, which was but little injured, and in August, 1804, made a second trial. This new vessel was sixty-six feet long and eight feet wide; but she moved so slowly as to be altogether a failure. Soon after the experiment, Fulton visited England, where he sought out Mr. Symington, and made a trip with him in his steam-tug on the Forth and Clyde Canal. Mr. Symington says, "In compliance with Mr. Fulton's earnest request, I caused the engine fire to be lighted up, and in a short time thereafter put the steamboat in motion, and carried him from Lock Sixteen, where the boat then lay, four miles west in the canal, and returned to the place of starting, in one hour and twenty minutes, to the great astonishment of Mr. Fulton and several gentlemen, who at our outset chanced to come on board."

An act passed the Legislature of New York, April 5, 1803, by which the rights and exclusive privilege of navigating all the waters of that State, by vessels propelled by fire or steam, which had been granted to Livingston in 1798, were extended to Livingston and Fulton for twenty years from the date of the new act. By this act the

producing proof of the practicability of propelling a boat by steam, of twenty tons capacity, at the rate of four miles an hour, with and against the ordinary current of the Hudson, was extended two years. Subsequently it was extended to April, 1807.

Fulton's experiments on the Seine in 1800–4, and his relations with Napoleon I., are thus graphically narrated by Mr. A. Ducasse. He says,—

"Between six and eight o'clock on the 8th of August, 1804, the two banks of the Seine, at Paris, at the foot of the heights of the 'Pompe à Feu' at Chaillot, were crowded with curious observers collected together to witness an experiment, the importance of which, unfortunately for the civilized world, was not recognized for a long time afterwards.

"Fulton was trying on the Seine the first steamboat, already invented by him some years before, and subsequently offered in vain first to France, then to England, and subsequently to his native country, the United States, which adopted the grand discovery.

"On that evening, then, vast numbers of curious gazers were assembled on the quay, and unfortunately the emperor, detained at the camp of Boulogne, was not in Paris. The trial took place without being witnessed by him, and, in spite of the scientific men delegated by his orders, this was not appreciated.

"A strange history is that of the short-lived relations of these two men of genius, Napoleon I. and Fulton, made to understand one another, and yet whom a fatal and jealous destiny seems to have perpetually kept apart.

"Towards the end of the year 1800, Fulton, then for some time residing in Paris, had been able to establish relations with several savans. He asked Volney, who was known to the First Consul, and who was a member of the Conservative Senate, to propose to the great man who governed France to make a trial of his system of navigation with steam as a motive-power.

"Volney naturally addressed himself to Forfait, the Ministre de la Marine, who laid the matter before the First Consul in the following terms:

"'The Ministre de la Marine submits to the First Consul the proposals concerning the "Nautilus,"—the name of Fulton's steamboat,—which Mr. Robert Fulton, citizen of the United States, has placed before him, through the citizen Volney, member of the Conservative Senate.'

"On the 4th of December, 1800, the First Consul wrote on the margin of this demand the following decision:

"'The Ministre will treat this affair with Fulton, Volney, and others.'

"Napoleon, occupied with the affairs of Germany, whither Moreau

was then marching to fight the battle of Hohenlinden, occupied with the vast interests placed in his powerful and organizing hands, unceasingly tormented with projects and inventions, did not at first seize the importance of Fulton's discovery. Moreover, he thought it was the business of the Ministre de la Marine to examine the affair, and to make a report upon it to him if it were serious.

"For the present, then, he thought no more about it.

"In the month of March of 1801, Forfait returned to the charge and submitted to the Chief of the State the following:

"'The Ministre de la Marine proposes to allow Fulton a sum of 10,000f. to enable him to make a thorough trial of the "Nautilus" at Brest, and to give him certain sums by way of reward.'

"Napoleon wrote on the margin of this demand, 'The First Consul agrees to this arrangement.'

"Fulton's project was then, by order of the Chief of State, sent to the institute to be examined. But it was not till three years later, in 1804, that the trial of the steamboat took place on the Seine, as we shall presently show.

"This boat, built under the direction of Fulton, by Messrs. Brown, of New York, was fifty metres long; it was moved by a double steam-engine, which turned paddles on each side, and gave it a speed equal to about that of a carriage drawn by post-horses.

"One fine day Napoleon bethought him of Fulton's project. It was at the time when he was in the midst of his troops at Boulogne, preparing his grand expedition against England.

"With his gaze constantly fixed on the great rival of France, he sought every means likely to insure the success of his descent upon the bank of the Thames. The plan of the American engineer recurred to him. Great indeed would be the chances of success if Fulton had really discovered the means of moving ships by means of steam,—a power the use of which might be regulated and controlled in spite of tides and winds. What a wondrous and unequaled victory obtained over the elements!

"Napoleon then asked his minister for Fulton's project. The minister sent it, and on the 21st of July, 1804, the First Consul, two months ago hailed as emperor, wrote the following curious letter:

"'I have just read the project of Citizen Fulton, engineer, which you have sent me much too late, since it is one which may change the face of the world. Be that as it may, I desire that you "immediately" confide its examination to a commission of members chosen by you among the different classes of the Institute.

"'There it is that learned Europe would seek for judges to resolve the question under consideration. A great truth, a physical, palpable truth, is before my eyes. It will be for these gentlemen to try and

see it and seize it. As soon as their report is made it will be sent to you, and you will forward it to me. Try and let the whole be terminated within eight days, as I am impatient.

"'From my Imperial Camp at Boulogne, this 21st July, 1804.'

"In the last two months the Parisians had seen with astonishment, off the quay of the Pompe à Feu, at Chaillot, a boat presenting a most strange appearance. It was armed, said the journals of the time, with two large wheels, placed on an axle like that of a cart. Behind these wheels, which were intended to be put in motion,—so ran the journals of 1804,—there was a sort of large stove with a pipe, a little fire-engine by means of which the wheels, and consequently the whole vessel, might be put in motion, turned, and made to go backward or forward.

"Some evil-minded persons had attempted, shortly after its arrival in the Seine, to sink it, and they had partially succeeded in their attempt. The relations of the period do not tell us who these persons were or what were their motives.

"When Fulton had repaired the injuries done the ship, the first trial of a steamboat in France, as has already been mentioned, took place on the Seine on the 8th of August, 1804. Fulton, assisted by three other men, put his boat in motion, taking in tow two vessels of less tonnage.

"During an hour and a half he afforded a curious crowd the strange spectacle of a ship moved, like a carriage, by wheels fitted with oars and set in motion by a fire-engine. The trial succeeded wonderfully, and appeared conclusive.

"The rate of progress up the Seine was from five to six kilometres per hour; in going down it was double.

"The ship was easily manœuvred in every direction, answered readily to the helm, was anchored without difficulty, and rapidly put again in motion. No well-broken horse was more easy to manage.

"At the present time all this excites no astonishment, but sixty years ago, when navigation was only comprehended by means of sails or oars, the wonder we have described was natural.

"What is really surprising is that the results of this trial were so unimportant; above all, when we remember that the emperor had ordered a serious examination of the discovery by the members of the Institute, and that several of them, among whom were such men as Bossout, Carnot, Prony, Perrier, and Volney, were on board the 'Nautilus' when the trial trip was made.

"And yet, four days afterwards, on the 12th of August, the *Journal des Débats* received an article communicated by the government on the subject of this trial, which terminates thus:

"'Doubtless they (the members of the Institute) will make a report

which will give this discovery all the *éclat* it deserves, since this mechanism, applied to our rivers, would be fraught with the most advantageous results to our internal navigation,' etc.

"Thus it appears that the system was not considered applicable to maritime navigation, and thus Messieurs de l'Institute—ocular witnesses of a fact the consequences of which they were able to appreciate, and of which they had been ordered to find out the value and to explain the causes—thought it was consistent with their dignity to reject scornfully the most wonderful discovery that had ever been submitted to their lofty understanding.

"For the rest, this is no exception to the general rule. Have we not seen in our own time distinguished soldiers reject percussion powder for muskets? Do we not even now see breech-loaders rejected for the army? and has it not required the campaign of Sadowa to open the eyes of most of the chiefs of the armies of Europe?

"Be this as it may, the reports on Fulton's discovery were far from favorable. Scientific men rejected it. The emperor is said to have sighed on reading their report, exclaiming, 'It is a pity!'

"What must have been the regret of the great captain when, eleven years later, while being borne into exile on board the 'Bellerophon,' under the English flag, he saw a small steamer manœuvring with facility in British waters, and, on inquiring who was the inventor, was told that his name was Fulton!"

1803.—M. Dalleney, a French engineer, in October, 1803, secured a patent, the first of its kind, for an original idea of his own for applying the steam-engine to two screws, one of which was placed on the bow on a movable axis, and served as a rudder.

At Boulogne-sur-Mer, on Monday, October 12, 1881, was unveiled a statue of Frederic Sauvage, whom the French claim to be the inventor of the screw-propeller. A Scotchman named Swan, born at Coldingham, Berwickshire, in the year 1787, who claimed to be the original inventor of the screw-propeller, died in London in 1869, and a monument in Abney Park Cemetery there bears the following inscription: "Few men have been greater benefactors to their country than the late John Swan. He was the original inventor of the screw-propeller in the year 1824, as now used in Her Majesty's ships, and published by the late Dr. Birkbeck in the *Mechanic's Register* of the same date."

1802–4.—In 1802, Oliver Evans agreed with James McKeever, of Kentucky (father of the late Commodore Isaac McKeever, United States navy), and Louis Valcourt, to build a boat to run on the Mississippi between New Orleans and Natchez. Mr. Evans's high-pressure engine was built in Philadelphia, and the boat in Kentucky; both were sent to New Orleans, but when the engine arrived at New Orleans it was found that the boat had been destroyed by a hurricane. The

engine was then set to sawing timber in New Orleans, and Mr. Stackhouse (one of the engineers), who remained with it twelve months and fifteen days, stated that during that period the mill was constantly at work, and that "nothing relating to the engine broke or got out of order so as to stop the mill one hour." This was the engine sent by Oliver Evans to drive a steamboat against the current of the Mississippi five years before Robert Fulton started the "Clermont" on the Hudson.

In 1804, Oliver Evans built a scow-steamboat at Philadelphia, for the purpose of clearing out the docks, which he called the "Eruktor Amphibolis."

To prove that wagons could be moved on land and vessels moved on water by the force of steam, Evans geared machinery to the wagon upon which the "Eruktor" was placed, and propelled his wagon by steam from the Centre Square, Philadelphia, to the Schuylkill River, at Market Street. The wagon-wheels were then taken off, the scow launched, and a paddle-wheel placed at its stern. It was then propelled down the Schuylkill to the Delaware, and up the latter river to Philadelphia, a distance of sixteen miles, passing several vessels bound to the same port.

Mr. Evans has left the following account of this experiment:

"In 1804 I constructed at my works, a mile and a half from the water, by order of the Board of Health of the City of Philadelphia, a machine for cleaning docks. It consisted of a large flat or lighter, with steam-engine of the power of five horses on board to work machinery to raise the mud into lighters. This was a fine opportunity to show the public that my engine could propel both land and water carriages, and I resolved to do it. When the work was finished I put wheels under it, and though it was equal in weight to two hundred barrels of flour, and the wheels were fixed on wooden axle-trees for this temporary purpose in a very rough manner, and attended with great friction of course, yet with this small engine I transported my great burden to the Schuylkill with ease; and when it was launched into the water I fixed a paddle-wheel at the stern, and drove it down the Schuylkill to the Delaware, and up the Delaware to the city; *leaving all the vessels going up behind me* at least half-way, the wind being ahead."

On the 26th of September, 1804, he closed an address to the Lancaster Turnpike Company as follows:

"It is too much for an individual to put in operation every improvement which he may invent. I have no doubt my engines will propel *boats against* the current of the Mississippi, and carriages on turnpike roads with great profit."

In 1805 he published a work describing the principle of his steam-engine, with directions for working it when applied to propel boats

against the current of the Mississippi, and carriages on turnpike roads.

1804.—In May, 1804, John Stevens[3] constructed a steamboat which went from Hoboken to New York and returned; its propelling power being a wheel at the stern, formed in the manner of a windmill or smoke-jack, and driven by a rotatory engine.

The engine not proving successful, it was superseded by one of Watt's engines, when the vessel attained an average speed of four miles an hour. For a short distance Stevens could make his boat go at a speed of seven or eight miles per hour; but was unable to maintain that speed for any length of time from a deficiency of steam.

Professor Renwick read a paper several years since before the New York Historical Society, in which he stated that the first he ever heard of an attempt to use steam for the propulsion of vessels was from a classmate who, in 1803, witnessed an experiment made upon the Passaic River by John Stevens, of Hoboken. According to his account, the propulsion was attempted by forcing water, by means of a pump, from an aperture in the stern of the vessel. In May, 1804, Mr. Renwick saw Robert L. Stevens and the late Commodore Stevens, as he was styled, cross from the Battery to Hoboken in a boat propelled by steam. This boat was a small one, and had tubular boilers, the first ever made. The machinery was made under his own directions, and in his own shop at Hoboken. It set in motion *two* propellers (the first double-screw) of five feet diameter each, and each furnished with four blades having the proper twist,—to obtain which he had the greatest difficulty with his workmen,—and set at an angle of thirty-five degrees. It is a proof of the remarkable accuracy and skill of the Hoboken work-shop that the engine of this first small propeller, which is carefully preserved in the Stevens Institute of Technology at Hoboken, was set up again forty years afterwards (1844) in a new vessel, which was modeled on the lines of the first boat, and without altering a screw was worked successfully, and in the presence of a committee from the American Institute was propelled at the rate of eight miles an hour. The second vessel is also preserved in the Stevens Institute at Hoboken. Three years before Robert Fulton's steamer, the "Clermont," plowed its way up the Hudson, this engine and boiler, in the hands of Colonel John Stevens, had demonstrated the efficiency of the screw-propeller.

[3] Colonel John Stevens, born in New York, 1749. Died at Hoboken, New Jersey, 1838. Colonel Stevens was the father of Edwin A. Stevens, founder of the Stevens Institute of Technology. During the war of the Revolution he served in a variety of civil and military capacities, and afterwards became the owner of large estates in New Jersey.

In 1787 he became interested in steamboats, from seeing that of John Fitch, and experimented for near thirty years. In 1789 he petitioned the New York Legislature for a grant of the exclusive navigation of the waters of that State, but without success.

1806.—Encouraged by the success of his former experiments, Colonel Stevens repeated them in 1806 on a larger scale, and built a pirogue fifty feet long, twelve feet wide, and seven feet deep, which attained considerable speed. He named her the "Phœnix."

THE "CLERMONT."

1807.—In the spring of 1807 Robert Fulton launched from the building-yard of Charles Brown, on the East Hudson, a steam-vessel, one hundred and thirty feet long, having eighteen feet beam and six feet hold, which he named the "Clermont," after the residence of his friend, patron, and associate, Chancellor Livingston. The "Clermont" was provided with a single engine, built by Boulton & Watt, in England, which lay for many months on the wharf at New York, near where the city prison now stands, between Canal Street and the Battery, being held by the agent of the ship which brought it over for non-payment of freight. This engine was twenty-four inches diameter of cylinder, and three feet stroke. The boiler was of the low-pressure pattern, twenty feet long, seven feet deep, and eight feet broad. The side-wheels were fifteen feet in diameter, with buckets four feet wide, dipping two feet in the water. The "Clermont" started on her first trip from New York for Albany, at 1 P.M., on the 7th of August, 1807, just three years to a day after Fulton's experiments with the "Nautilus" on the Seine.

Robert Fulton, with a few friends and mechanics and six passengers, was on board. An incredulous and jeering crowd were gathered on the shore as she cast loose. She arrived at Clermont, a distance of one hundred and ten miles, on Tuesday at the same hour. Leaving Clermont on Wednesday, at 9 A.M., she arrived at Albany at 5 P.M. the same day, a distance of forty miles, in eight hours. "The run," says Fulton, "is one hundred and fifty miles in thirty-two hours,—nearly equal to five miles an hour. She kept up the same rate of speed on her return trip to New York, and made several trips during the summer with like results."[4]

[4] Marcus Richardson, of Bangor, the oldest Mason in Maine, who died in that city January 7, 1881, aged one hundred and six years and two months, witnessed this trial trip of the "Clermont." He was a privateersman in the war of 1812, and was a Mason seventy-seven years.

In August, 1882, Geo. Dexter, aged eighty-four years, of Albany, and Wm. Perry, of Exeter, New Hampshire, aged ninety years, who were passengers in the "Clermont" on her return trip from Albany to New York, were still living.

At the time of the great triumph, Peter Cooper was an apprentice boy, Thurlow Weed was a cabin-boy on a Hudson River sloop, and Charles O'Connor a prattling child of three years. This year (1882) a movement has been set on foot to erect a suitable monument to the memory of the great inventor, whose ashes lie neglected in an obscure vault at the southwest corner of Trinity Church.

The name of the chief engineer of the "Clermont" on her first trip up-river has not been preserved; but Mr. Fulton, having had some difficulty with him, promoted Mr. Charles Dyck to his place on the return trip. Mr. Dyck was born in

Professor Renwick, describing the "Clermont" as she appeared on her first trip, says, "She was very unlike any of her successors, and very dissimilar from the shape in which she appeared a few months afterwards. With a model resembling a Long Island skiff, she was decked for a short distance at stem and stern. The engine was open to view, and from the engine aft a house like that of a canal-boat was raised to cover the boiler and the apartment for the officers. There were no wheel-guards. The rudder was of the shape used in sailing-vessels and moved by a tiller. The boiler was of the form then used in Watt's engines, and was set in masonry. The condenser was of the size used habitually in land engines, and stood, as was the practice in them, in a large cold-water cistern. The weight of the masonry and the great capacity of the cold-water cistern diminished very materially the buoyancy of the vessel. The rudder had so little power that she could hardly be managed. The skippers of the river craft, who at once saw that their business was doomed, took advantage of the unwieldiness of the vessel to run foul of her as often as they thought they had the law on their side. Thus in several instances the steamer reached one or the other termini of the route with but a single wheel."

Before the season closed, the wheels were surrounded by a frame of strong beams and the paddles were covered in; the rudder was changed to the pattern now used on all river boats and was worked by a wheel, the ropes from which were attached to the ends most distant from the pintles. This rudder rendered the vessel manageable, and the beams placed around the wheel were capable of inflicting instead of receiving harm in a collision with sailing-vessels.

During the winter of 1807–8 she was almost wholly rebuilt. The hull was considerably lengthened, and covered from stem to stern with a flush deck. Beneath this two cabins were formed, and surrounded by double ranges of berths, fitted up in a manner then unexampled for comfort, and the public taste was consulted in the application of numerous coats of rather gaudy paint. Thus improved, she commenced her trips for the season of 1808, and started regularly at the appointed hour, at first much to the discontent of travelers, who had previously been waited for by sloops and stages. At the end of the season she proved too small for the crowds who thronged to take passage.

The success of the "Clermont" led Fulton and Livingston to build

1787 and died in 1871. While at Albany, a gentleman, Mr. Dyck said, came on board and engaged passage to New York. Mr. Fulton, on receiving his money, shed tears, remarking that it was the first he had received for all his labor.

In 1813, Mr. Dyck was engineer on the "Car of Neptune," from New York to Albany, and also on the "Firefly," from New York to Poughkeepsie. He was on the first steamer on the Ohio and Mississippi Rivers; also on the first steamboat on the Fulton Ferry Line, and from New York to New Brunswick on the Philadelphia Line with Captain Vanderbilt. For five years before his death he was blind.

two other vessels and add them to the line, viz., "The Car of Neptune" and the "Paragon," of three hundred and three hundred and fifty tons respectively. Fulton sent the following account of the first trip of the "Clermont" to the *American Citizen:*

"SIR,—I arrived this afternoon at four o'clock in the steamboat from Albany. As the success of my experiment gives me great hopes that such boats may be rendered of great importance to my country, to prevent erroneous opinions and to derive some satisfaction to the friends of useful improvements, you will have the goodness to publish the following statement of facts:

"I left New York on Monday at one o'clock, and arrived at Clermont, the seat of Chancellor Livingston, at one; time, twenty-four hours; distance, one hundred and ten miles. On Wednesday I left the Chancellor's at nine in the morning, and arrived at Albany at five in the afternoon; distance, forty miles; time, eight hours.

"The run is one hundred and fifty miles in thirty-two hours,—equal to nearly five miles an hour. On Thursday, at nine o'clock in the morning, I left Albany, and arrived at the Chancellor's at six in the evening. I started from thence at seven, and arrived at New York at four in the afternoon; time, thirty hours; space run through, one hundred and fifty miles,—equal to five miles an hour. Throughout my whole way, both going and returning, the wind was ahead. No advantage could be derived from my sail. The whole has therefore been performed by the power of the steam-engine, etc.

"ROBERT FULTON."

Fulton also wrote to a friend, "I overtook many sloops and schooners beating to windward, and parted with them as if they had been at anchor. The power of propelling boats by steam is now fully proved. The morning I left New York there were not thirty persons who believed that the boat would ever move one mile an hour or be of the least utility; and while we were passing off from the wharf, which was crowded with spectators, I heard a number of sarcastic remarks. This is the way in which ignorant men compliment what they call philosophers and projectors. Although the prospect of personal emolument has been some inducement to me, yet I feel infinitely more pleasure in reflecting on the immense advantages my country will derive from the invention."

The British *Naval Chronicle* for 1808 has an extract from a letter written by a gentleman of South Carolina, one of the favored few who were passengers on board the "Clermont" on her first trip. Under date *September* 8, 1807, he says, "I have now the pleasure to state to you the particulars of a late excursion to Albany in the steamboat made and completed under the directions of the Hon. Robert R. Livingston and Mr. Fulton, together with my remarks thereon. On the morning of the 19th of August, Edward P. Livingston, Esq., and myself were honored with an invitation from the Chancellor and Mr. Fulton to proceed with them to Albany in trying the first experiment up the river Hudson in the steamboat. She was then lying off Clermont, the seat of the Chancellor, where she had arrived in twenty-four

hours from New York, being one hundred and ten miles. Precisely at thirteen minutes past nine o'clock A.M. the engine was put in motion, when we made head against the ebb-tide, and head wind blowing a pleasant breeze. We continued our course for about eight miles, when we took the flood, the wind still ahead. We arrived at Albany about 5 P.M., being a distance from Clermont of forty-five miles (as agreed upon by those best acquainted with the river), which was performed in eight hours without any accident or interruption whatever. This decidedly gave the boat upwards of five miles an hour, the tide sometimes against us, neither sails nor any other implement but steam used.

"The next morning we left Albany with several passengers on the return to New York, the tide in favor but the wind ahead. We left Albany at twenty-five minutes past nine o'clock A.M., and arrived at Clermont in nine hours precisely, which gave us five miles an hour. The current on returning was stronger than when going up. After landing us at Clermont, Mr. Fulton proceeded with the passengers to New York. The excursion to Albany was very pleasant, and represented a most interesting spectacle. As we passed the farms on the borders of the river every eye was intent, and from village to village the heights and conspicuous places were occupied by sentinels of curiosity,—not viewing a thing they could possibly anticipate any idea of, but conjecturing about the plausibility of the motion. As we passed and repassed the towns of Athens and Hudson, we were politely saluted by the inhabitants and several vessels, and at Albany we were visited by his excellency the governor and many citizens. Boats must be very cautious how they attempt to board her when under way, as several accidents had nearly happened when boarding her. To board ahead will endanger a boat being crushed by the wheels, and no boat can board astern. The difference between the wake of 'Neptune's Chariot' and that of a common water-carriage is very materially open for observation, as when you approach the first you will be told by anticipation to pay respect to a lady in the 'Chariot,' as you will be readily notified by the expansion of a fan, which forms the dimensions of her wake, but moving with great impetuosity from the warm repulsion. It is a curious fan; it only spreads by an aquatic latchet, being sprung by the kicking of the horses. I may now venture to multiply and give you the sum-total. The boat is one hundred and forty-six feet in length and twelve feet in width (merely an experimental thing), draws to the depth of her wheels two feet of water, one hundred feet deck for exercise, free of rigging or any incumbrances. She is unquestionably the most pleasant boat I ever went in. In her the mind is free from suspense. Perpetual motion authorizes you to calculate on a certain time to land; her works move with all the facility of a clock, and the noise when on board is not greater than that of a vessel sailing with a good breeze."

The Philadelphia *Times* published in 1878 a chat with a survivor

of the party on board the "Clermont" on her return trip. This gentleman, the Rev. Frederick Reynolds Freeman, a Baptist clergyman of Illinois, was then on a visit to Philadelphia. He was carried in his mother's arms at the time, being but two years old. His personal remembrance, of course, does not amount to much, but he has, said the *Times*, a store of information concerning the trip not in the possession of anybody else, for as soon as he was old enough to realize the importance of the occasion, he sought with more assiduity than a person less directly interested would for all the facts concerning it.

His father, Elisha Freeman, before retiring to a farm, had been a sea-captain, and for that reason was invited, with a small number of other persons, including municipal officials of Albany, to go on board the "Clermont" upon its arrival. Captain Freeman went, taking with him his wife and little son, Freddy. "The event is like a dream to me," says Mr. Freeman. "Probably my memory would now be unable to reach it but for the constant rehearsals of the scenes and incidents made to me in my youth.

"When Columbus walked the streets in Spain meditating upon his project, which had become generally known, men and small boys would point their fingers at their foreheads and exchange smiles. Just so Robert Fulton was treated before he turned the laugh upon a country of scoffers.

"The first steam-packet was trim and handsome enough, excepting the boilers, machinery, and smoke-stack, which were rude, cumbrous, and of extremely formidable appearance.

"The side-wheel was a clumsy affair, uncovered and with twelve huge paddles, held in their place by a ring half-way between their extremities and the hub, that sent water splashing upon the deck with every revolution. The top of the smoke-stack was about thirty feet above the deck,—nearly as high as the two masts, from the rear one of which floated the Stars and Stripes. Hours before she started a great multitude had assembled along the wharves to witness the expected inglorious ending of what was generally known as 'Fulton's folly.' Cries of 'God help you, Bobby!' 'Bring us back a chip of the North Pole!' 'A fool and his money are soon parted!' etc., were frequent, loud and annoying. Fulton, however, knew the crowd were sincere in their ridicule, and with a confident smile went on superintending preparations for the start, as if he knew that triumph would presently more than overbalance the sneers, jibes, and cat-calls of the vulgar and the pitying manners of the more refined. Smoke issues from the stack; the hawser is drawn in; the side-wheel quivers; it slowly revolves; Fulton's own hand at the helm turns out the bow; he is pale, but still confident and self-possessed; the 'Clermont' moves out into the stream, the ponderous machinery thumping and groaning, the wheel frantically splashing, and the stack belching like a volcano; the 'Clermont' steadily moves; all aboard swing their hats into the air and give a cheer that is immediately taken up by the entire multitude on land;

the crowd remain cheering on the piers until the 'Clermont' is out of sight up the Hudson."

Mr. Freeman says that the boat arrived at Albany thirty-six hours after starting from New York. It had not been continually in motion, the party having stopped at the residence of Chancellor Livingston on the way up. The speed was at the rate of five miles an hour. The appearance of the strange vessel as she steamed up the river had a remarkable effect, even in daytime, upon the crews of craft passing by, for comparatively few of the skippers coming down could, in those days of slow mail and no telegraph, have been prepared to encounter such an oddity; but at night the "Clermont" spread consternation and terror on all sides. It was very dark, and the fires were fed with dry white-pine wood, which when stirred would send up columns of flame and sparks from the mouth of the tall stack. This apparent volcano, moving steadily through the darkness up the middle of the river, and accompanied by the rumbling and groaning of the hard-laboring machinery, was well calculated to strike terror into the hearts of sailors on the sloops and other craft coming down with grain and general farm produce, who had never heard of any motive-power for vessels except wind, and who, withal, were extremely superstitious.

"My father and others told me," says Mr. Freeman, "that whole crews prostrated themselves upon their knees and besought Divine Providence to protect them from the horrible monster that was marching on the tides and lighting up its pathway by its fires."

When the members of the Freeman family went aboard the "Clermont," upon its arrival at Albany, Mrs. Freeman observed a workman emerging from the engine-room—a place very suggestive to her of the infernal regions—carrying in his hands a ladle filled with molten lead. With this he proceeded to stop up holes whose presence here and there in the rude machinery was indicated by escaping steam. Captain Freeman then learned that the workman had been busily employed doing the same thing ever since the "Clermont" had left New York. The people of Albany had been apprised of the arrival in advance, and the whole town turned out to receive Fulton and his steamboat, giving them an enthusiastic reception.

The "Clermont" had not been long under way on its first trial when Fulton ordered the engine stopped. Having observed that the paddle-floats were too deeply immersed in the water, he shifted them nearer to the centre of the paddle, so that they did not enter so deeply into the water; and this alteration had the effect of increasing the speed of the vessel.[5]

[5] David Dunham, whose eccentricities and enterprise were alike celebrated, the principal owner of the celebrated privateer "General Armstrong," was one of the foremost patrons of Robert Fulton in his experiments with steam navigation, and advanced large sums to further his projects. An accident prevented him from being the first to apply steam to ocean transit. He was knocked overboard or fell from the deck of one of his own vessels. When his body was recovered, among the

A correspondent of the Cincinnati *Gazette* in 1880 says,—

"Fulton's first successful boat was called, not the 'Clermont,' but the '*Katharine* of Clermont,' after Fulton's wife, Katharine Livingston, of Clermont Manor. I read the name so painted, having been a passenger on the first regular trip made by her down the Hudson. As there are few survivors of that notable event, which occurred in *April*, 1808, an account of it may gratify your readers. I was a student at Union College, Schenectady, and arrived at Albany in charge of a maiden lady of mature years. The river was then navigated by sloops, and on reaching Albany there was no vessel in port. The lady accordingly went to a friend's house, while I took up my quarters at a tavern. During the night the 'Katharine' arrived from Kinderhook, a few miles down the river. She had made her *trial trip the previous* fall,[6] being then a mere skeleton. The winter was spent in fitting her up. She was about the size and shape of an ordinary canal-boat, painted a light color, and provided with a small upright engine. She was advertised to leave for New York at nine o'clock on the morning after her arrival. I at once determined to take passage. My fair charge, with the proverbial dilatoriness of her sex, was slow in getting ready, and when we reached the wharf the steamer was out in the stream. She stopped, however, in response to the signal made by ourselves and the other persons gathered on the bank, and we went out to her in a skiff. There did not seem to be much excitement in Albany, but at Hudson, where the engineer showed the capacity of the craft by turning her about and steaming a little way up the river, a great crowd was gathered. There were about fifty passengers on board, quite a large proportion being boys and young men. I was to land at Kingston, seventy-five miles below Albany. Before reaching that place the boat ran aground, and it took twelve hours of hard work to get her afloat again. Fulton was on board. He was plainly dressed, and wore a boot on one foot and a shoe on the other. He appeared buried in thought and spoke to no one. Shortly after the boat left Kingston, where I quitted her, her boiler burst, but, as it was a *sheet-iron affair*, no one was hurt. She was taken to New York for repairs, where I saw her about a week later, having made the remainder of my voyage in a sailing-vessel."

papers in his pocket was a contract with the government for carrying the mails between this country and Great Britain, giving specifications as to the fleet of steamers he proposed to establish. Soon after his demise his eldest son emigrated to the South and established a plantation in Florida. His lineal grandsons entered the Confederate army.

Fulton died in London, England, February 24, 1815.

[6] Her trial trip was made August 7, 1807, as already shown.

GEORGE H. PREBLE,
Rear-Admiral U.S.N.

(To be continued.)

A CAVALRY SURGEON'S EXPERIENCES IN THE BATTLE OF THE WILDERNESS.

BEFORE the close of April, 1864, great preparations for the cavalry corps had been made for the opening campaign of that year. Sheridan, who had somewhat distinguished himself at the battle of Stone River, and also at the battle of Chattanooga, in November, 1863, had been transferred to the Army of the Potomac, and had been appointed as commander of all the cavalry in that department. I can vividly recall the first impression I had of that new chief of our branch of the service. Sheridan, as was well known, was powerfully built though below the medium stature. When he first came among us he wore a chapeau which was much lighter in color than those we were accustomed to see; it had an exceedingly low crown, with a brim which projected prominently in front. His coat, which he "kept well buttoned to the chin," was of the lighter shade. When seated in the saddle he carried himself moderately erect, though his spurs and the heels of his boots were inclined towards the horse's flanks and his toes were turned outward. This habit of riding was contrary to the regulation style, which had often been exemplified by General Keyes, a former instructor of cavalry tactics at West Point, and which had also been taught to some of us by General King and by Captain Malone, who also had studied at the same military institution. His peculiarity of dress, stature of body, and manner of riding gave him a most singular appearance. Sheridan had, however, large and piercing eyes and a most intelligent face. The experienced cavalier could easily discern that he had an unusual quickness of perception on matters of greater moment, and an energy of movement which more than counterbalanced any lesser defects, and which could not otherwise than make him in due time a foremost leader, at least of the cavalry commanders.

On April 30 I received as surgeon-in-chief of the Second Brigade, First Cavalry Division, through the proper channel from army headquarters, an order to establish without delay a brigade hospital. This was to be in its nature a movable one, fitted with all conveniences for a rapid march. The tents and furniture supplied to regiments were to

be used in its appointment. The men were to be admitted into this hospital only upon an order or upon an ambulance pass of a regimental medical officer. The sick and the wounded carried in the ambulance on the march were to be lodged and attended to in camp in this hospital. The organization was as follows: First, a surgeon-in-charge. This officer, who had also charge of the ambulance train of the brigade, was to be changed once in two weeks, so that in the course of a campaign all capable medical officers should benefit by the experience of the position. The surgeon-in-charge was responsible for the lodging, feeding, clothing, personal cleanliness, and medical attendance of patients, for dressings in surgical cases, records, and monthly reports. In emergencies he was to apply for assistance to the surgeon-in-chief of the brigade. There were to be one hospital steward and two nurses permanently detailed for each regiment of the brigade; from these, cooks were to be selected. All great or capital surgical operations were to be performed by the surgeon-in-chief of the brigade or under his direction, or by an operating staff appointed by him, of which he was to be the chief. Other important orders were also promulgated, all of which were to be strictly observed by our cavalry medical officers.

From August, 1861, to this time I had had considerable service; I had participated in several battles, including those of the Peninsular campaign in 1862 and in those of the Rappahannock and the Rapidan and of other places in 1863. Early in the spring of 1863 I had been commissioned as surgeon, and later in the year had acted at times as surgeon-in-chief of brigade, to which position, early in 1864, I had been permanently assigned.

At 6 A.M., May 3, we left the old camping-ground at Culpeper, which the brigade had occupied during the winter immediately preceding, and crossed the Rapidan to engage in the Wilderness campaign; during the night after the first day's march we encamped near Chancellorsville. On the 4th and 5th we began active operations against Lee's army. On the 6th our position in the battle of the Wilderness was on the left of the Second Army Corps. In this position my brigade engaged the enemy's infantry; our cavalrymen were dismounted and deployed on foot. For some time we were concealed in ambuscade; we afterwards fell upon the Confederates and drove them back a long distance from their skirmish line. On the 7th we engaged Stuart's cavalry near Todd's Tavern. Here the enemy at first fought with great valor, but was at length compelled to retire at the approach of our boys, who had full confidence in the effectiveness of their own carbines, their seven-shooters, in their pistols when in a hand-to-hand encounter, and especially in their sabres, the keenness of whose blades never failed to carry terror and dismay after the chief bugler with inspiring notes had sounded along the line "to horse," "mount," "charge." On the 8th we did not hesitate to engage the advance of Longstreet's corps of

infantry on the Spottsylvania road at Ny Run. At this place our loss in killed and wounded was heavy. We, however, maintained our position, and forced the enemy to leave that road and to fall back to his main column on the right.

It was six days since we left Culpeper, and during that time we had had scarcely any sleep, and our food had been wholly insufficient. Everything seemed in confusion. The rapid evolution of the cavalry, their frequent change of position, over bad roads, over fences, concealed in ambush, broken in small parties, deployed on foot, and their charging upon the enemy with drawn sabres and carbines, all tended to complicate the duties of the medical department, especially the work of the chief medical officer of the brigade, who directed the movements of the ambulance train and had the selection of a safe and proper place for the temporary hospital, and had to exercise immediate supervision over all operative measures undertaken for the relief of the wounded. If the medical officer who accompanied the cavalry failed to keep within proper distance of his command, he was liable to be gobbled by the enemy; if he kept too near the front, he was sure to draw the enemy's fire and thus endanger not only his own life but the lives of the wounded and of the command generally. Many times while operating on wounded soldiers we were driven out of our retreat by the enemy in a most unceremonious way. While on the road near Ny Run a shell fired from one of the enemy's guns exploded under the operating-table. Three patients were under the influence of chloroform at the time, but fortunately no one was seriously injured, though a can of the anæsthetic and a case of instruments were scattered promiscuously. At the battle at Todd's Tavern, while returning from the extreme front, after an interview with the brigade commander, I met a soldier who, having received a wound in the right foot, was going without his horse towards the rear. He asked to have his wound dressed. I advised him, however, not for a moment to stop there, but to hobble on as fast as he could, because we were in close proximity to a large column of Stuart's cavalry. His outcries were so great I concluded to dismount and to give his wound a temporary dressing. Before I had finished, the contest was renewed; bullets flew in every direction, one striking our poor soldier, shattering his right arm in such a shocking manner that it necessitated amputation at the shoulder-joint. Our cavalry soldiers, I am most happy to be able to say, were brave fellows; they knew why they had come to the front. It was only in an extreme case that a soldier lost his self-control.

Many a time the hospital department was saved from immediate capture or loss, and my own personal safety was preserved, through the unexpected assistance proffered by some one or more of these messengers of fidelity. The work which the cavalry, and especially that which that famous first division had accomplished in forcing back Longstreet's

advance in the Wilderness, demonstrated to Sheridan and even to Grant that the mounted troopers, as they had been disciplined, were a much more important branch of the service than had heretofore been realized.

Up to this date in operations in the Wilderness the Confederates under Lee had suffered severely, and the Union army under Grant had also sustained so great loss that the movement could only be regarded as one unattended with victory. On the 8th orders were received that all the wounded of our cavalry should be sent without delay to Fredericksburg. A copy of the list of the wounded, which I have preserved, shows that more than a hundred disabled soldiers from my brigade were thus sent from the battle-fields of that terrible contest to the hospital at Fredericksburg. Fredericksburg at that time had become a veritable charnel-house. The loss in the battles of the Wilderness has by different writers been variously estimated. According to the official report from the surgeon-general's office in Washington, there occurred in that concatenation of engagements on both sides upward of thirty-eight thousand in killed and wounded. Many, if not the most of these, were taken from the Wilderness to that place, which had already become memorable as the scene of a series of desperately-fought battles between Burnside and Lee. Among the cases were several in which the injury occurred in the leg, thigh, arm, and head. In fact, most every kind of bullet-wound could be seen. Some had been shot in more than one part of the body at the same time; some had been killed almost instantaneously, while others were mortally wounded and died soon after. The most shocking cases were those in which the skull had sustained extensive multiple fractures. The Confederates in their precipitous rout had left behind them on the field scores of such that came under our immediate care. These poor fellows imploringly besought us to extend the hand of relief, which we hastened to do with the greatest alacrity, though our hospital resources and our strength were already taxed to the utmost capacity. The regiments composing my brigade were the Fourth New York Cavalry, the Ninth New York Cavalry, the Seventeenth Pennsylvania Cavalry, and the Sixth New York Veteran Cavalry, my old regiment. All these regiments were organized during the early months of the war, and since that time had had an extended service in the field; their commanders and other officers had proved themselves to be most efficient and had participated in many a desperate engagement.

On the 9th of May, while General Grant was still fighting and manœuvring without as yet having accomplished any very definite results, General Sheridan was directed to commence a raid on the enemy's lines of communications, and to threaten if possible the stronghold at Richmond. That morning when we started on our march from the Wilderness was delightful. The sun was shining

through the trees, which were putting forth their foliage, and the fruitful fields all around were exhaling their rich perfumes; the merry singing of the birds and the gentle hum of the bee lent a charm to the scene. All this for a while was in striking contrast to those never-to-be-forgotten days when blood and butchery so freely abounded and pitiful groans and cries went up, whose dreary and saddening echo still lingers in my ears. Our first day's march was not interrupted by the appearance of any hostile force. I well remember a remark by General Devin, the commander, made to me while we were marching; our command had taken that day the advance. General Devin said to me, "Grant will not get to Richmond this time." This was an early apprehension of the results that were to follow. Our cavalry, as will be seen, was doing nobly; it had proved itself to be more than a match for the same arm of service on the Confederate side. Our cavalry had frequently checked the advance of Fitz-Hugh Lee's division, had defeated Hampton's Legion, and was fast gaining the ascendency over Stuart's famous troopers, whom we defeated, besides mortally wounding that rebel commander, at Yellow Tavern, May 12, only three days later. Our cavalry had also ventured while dismounted to engage the enemy's infantry. Perhaps our leading cavalry generals felt that our own infantry should undergo a greater development for real action, or that our enemy's foot-soldiers would have to fall by their own defection below their usual standard of efficiency, before an onslaught on a grand scale on the part of our infantry against them could be successfully made. At the close of the day orders were received to halt and to bivouac for the night.

Captain Raymond L. Wright, who was killed at the battle of Winchester, September 19, 1864, was then acting as provost-marshal. From information he had obtained from some prisoners and from the inhabitants while stationing the troops for the night after the halt was made, he learned that there were stores at Beaver Dam, and that the enemy had trains which ran as far as that point. He communicated these facts to General Devin, who immediately advised Sheridan not to stop there that night, but to push on with all possible speed to that place. I recall to mind the conversation that ensued between Captain Wright and General Devin, and my accompanying that evening these officers to General Sheridan's head-quarters. Sheridan waited for a few moments and then said to Devin, "We will saddle up and push on for the night." Wright and myself were intimate friends: we messed together and often slept in the same tent during that summer campaign. Wright was a brave officer; he had a wonderful tact: he could get out of prisoners and out of the inhabitants more real important information than any other person we had among us. We immediately resumed our march, and were able to reach Beaver Dam Station just as the Confederate train loaded with supplies had entered. The train, dépot,

and all the stores, including a million and a half of their army rations, as is well known, were by our cavalry force destroyed that morning. This was a brilliant achievement for Sheridan. On our return from that expedition, as we approached our army lines we were greeted on all sides by men shouting "Beaver Dam!" "Beaver Dam!" "Cavalry!" etc., etc. From this point the cavalry pushed on to the Brook Turn-Pike towards Yellow Tavern, Ashland Fork, and Six-Mile Post. Here our rear-guard, which on that day included my brigade, was overtaken by the advance of a strong detachment of Stuart's cavalry. This force of the enemy was in hot pursuit of us. Near Yellow Tavern there ensued a desperate engagement, in which our loss was heavy, including a number of men and some officers, who were mortally wounded. We were able to attend to all the wounded, but were compelled to leave some, who were unable to bear transportation, to the tender mercies of the enemy. Those whom we left behind were such as had been mortally wounded. Sufficient dressings were left for them, and a competent medical officer was detailed to render them assistance. The battle lasted late into the evening, and the enemy was driven back with great slaughter. It was at this battle that the Confederate General Stuart received his mortal wound. That evening the main column of our cavalry was in motion, and the ambulance and ordnance stores were also sent on.

A few of us had not as yet started, owing to the extra work of attending to the wounded. Just as I was about to mount my horse to go on, a soldier who had been wounded in the hand and wrist came up to me for help. The radial artery had been severed; the hemorrhage for a while was uncontrollable. By the help of the light from two little pieces of adamantine candle I finally succeeded in getting ligatures upon the artery so as to arrest the hemorrhage. We then mounted our horses, when suddenly to our great surprise a volley of musketry by the enemy was fired into our midst; fortunately again, no one was seriously injured. We then put spurs to our steeds and sped away in happy flight towards our column, which was now many miles in the advance. The night was cloudy and dark; the roads were lonely and in some places precipitous. Our horses, however, seemed conscious of the duties that were before them, and so we were carried along as swiftly as any knight of old had ever traveled before. Our brigade had continued its march and had crossed the Brook Run, and was able next morning to carry the outer defenses of Richmond. Our attack on the outer works of that citadel, which had proved itself so long until this hour "as unassailable," was indeed a surprise to its defenders, who quickly began to offer much resistance. The bold charge made by our never daunted troopers soon routed that motley gang, the guards of the trenches, styled by themselves chivalrous knights, who for the sake of giving the appearance of effectiveness in

attitude had but recently been snatched as it were "from the cradle and from the grave."

Richmond now loomed up before us; we swung, however, to the left, towards the meadow bridges, which had been rendered totally impassable. The way now leading to that avenue for escape was held by Fitz-Hugh Lee's division dismounted. At this juncture batteries from the fortress at Richmond opened on us. Our position had now become indeed critical. In our rear, columns of cavalry and infantry were hurrying to overtake us, on our right was the Confederate stronghold mounted with heavy ordnance, on our left the lowlands and creeks abounded, while before us, as said before, the bridges had been destroyed, and the way leading to them was barricaded and defended by a strong force of the enemy. The night before had been dark, the morning was overcast, and a heavy rain-storm at length set in, which added much to our discomfort. A strong detachment of our troopers, aided by the pioneer corps, was pushed forward to repair the bridges. The contest was now becoming desperate. Sheridan took his position on the brow of the hill overlooking the swamp while our advance was engaged in the assault. Word soon came back that more force was needed. Sheridan asked Devin what other assistance he could furnish from his brigade. General Devin immediately directed Adjutant-General Mahnken to dispatch with all possible speed companies from the Seventeenth Pennsylvania Cavalry, from the Sixth New York Cavalry, and another detachment from the Ninth New York Cavalry, under charge of Major A. McQuinn Corrigan. These brave troopers dismounted, marched down the hill, and soon disappeared among the trees and bushes that skirted the swamp; for a while all was silent. At length the low volleys from the carbines bespoke that the terrible contest for the mastery of the situation had begun. Our soldiers marched resolutely to the front of the barricade, and were followed by members of the pioneer corps, who with axes, spades, picks, hooks, and guns soon demolished the works and put again to flight that trusted division of Confederates, which bade us the last defiance during our expedition. As soon as the bridges could be repaired our whole column was put in motion; the ordnance wagons and ambulances took the lead. The heavy guns from the Richmond forts kept up a brisk enfilading fire, which contributed much to the excitement and served as a parting if not a quickening benediction to our retiring ranks. Our list of wounded was not unduly large. The Ninth New York Cavalry suffered the most. Major Corrigan, who was among the foremost to lead the assault, was wounded in the right leg; both bones were badly comminuted, and before he could be rescued severe hemorrhage had occurred. He was placed in an ambulance, but his sufferings were so great during our rapid march that he was taken out and carried in blankets by his men. At our first halt his leg had to be amputated at

the knee-joint. On coming out of the chloroform after the operation he remarked, "I am still Corrigan, but not old Corrigan, not Corrigan as before." His men loved him; any one of them would have given his life for him. He was a grand officer, nature's nobleman; his presence in the hour of battle was always a signal for splendid achievement. All the medical officers were anxious to do something for his relief, and though exercising our best skill we were compelled to lose him. The wounded were tenderly cared for. Our hospital arrangements proved very efficient. We had an abundance of beef-stock, which had been put up in cans; we had milk, whisky, brandy, and refined sugar. One bottle of good whisky and one can of condensed milk mixed in a bucket of warm water well sweetened with loaf-sugar proved most refreshing when served to those who had sustained severe gunshot injuries. Fluid extract of Jamaica ginger was sometimes added instead of spirits. We were also well supplied with chloroform, and with materials for dressing the wounds; we had an abundance of medicines, and in small quantities several kinds of delicacies to be used in cases of emergency.

In closing this sketch I trust that it may not be deemed inappropriate to consider briefly the advantages this expeditionary undertaking offered to Grant's army in and about the Wilderness. After we had started on our march it was quietly whispered by some of the leading officers that a serious mistake had been made in thus allowing so large a body of cavalry to pass from the immediate control of the lieutenant-general of the army. Grant, as is without doubt generally known, continued his operations after our departure. The presence of the cavalry would most materially have assisted him in his attempt at a movement by the enemy's right flank and in his massing his force between Lee and Richmond. The cavalry could have interfered with Lee while taking a shorter course to check Grant's progress at Spottsylvania Court-House, where his operations were not in fact attended with any very positive results. It was felt that we could have inflicted much greater damage to Lee at those important places than we really did by engaging at the points as above described. It is true that we made a good hit at Beaver Dam, but this was only incidental in its operation. It was rather the result of the acumen of a subordinate than of a well-considered plan for aggression. The loss which Lee sustained in consequence of the engagement at Yellow Tavern on May 12 was of infinite benefit in its moral force to our cause. At that battle it must be remembered that that famous chief of the Confederate cavalry was mortally wounded. Stuart in the earlier months of the war, though somewhat overrated, had been the cause of much alarm to our commanders at the East. As prominent actors in that mighty contest for the supremacy of the Constitution we have no cause for complaint we did good service and achieved for the cavalry corps a name of im-

perishable renown. Had we remained with the commander-in-chief in and about the Wilderness, others, in their eagerness to shine above their fellows, would undoubtedly have profited by our victories and have accredited to themselves the glory of the work which we in all probability would there have accomplished.

AUGUSTUS P. CLARKE, M.D.,
Surgeon and Brevet Colonel U.S.V.

CONYNGHAM FOXE AND THE CHARITY BALL.

AT the hour of nine, in the Hotel Bellevue, fronting Broad Street and a frozen city, Conyngham Foxe was weighing with much bitterness the advisability of casting loose fore and aft from the social shore and steering out alone into regions unknown and beyond hope of succor.

He should have been elsewhere. It was the night of the Charity Ball, and in some way, through the machinations of his brother's wife, Mrs. Montmorency Foxe, and his former guardian's wife, Mrs. Penn Gaskill Williamson, he had been selected, assigned, and warned to appear as escort to Miss Rittenhouse, the heiress expectant of two millions, and her mother.

If he had been called upon to direct his own hanging and spring the drop himself, there might have been something in the prospect worth laughing at. But to receive notice of this high-handed act of ownership and superiority over him from two respectable ladies who must have observed long ago how utterly he denied their prerogatives, was an ill too grievous for human flesh to bear.

They had written, the two of them, no doubt,—one providing chirography, the other composition and rhetoric,—

"DEAREST CONYNGHAM,—It is all arranged. We will leave our house at ten-thirty sharp,—West Logan Square. You are to take Miss Rittenhouse, and of course her mother. Look your sweetest, Cony dear, and come early.

"Your loving sister,
"LUCRETIA."

"Look your sweetest,"—to a man! Could anything exceed such driveling inanity!

It was time to oppose this tyranny. The end must come some time. Why not now? Yet even a shipwrecked sailor in mid-ocean, from clinging to his spar a few hours, acquires an affection for it not to be overcome without exertion. Before cutting the knot and sinking he is bound to do a little desperate thinking. Conyngham had been

taught to dread social ostracism with the same degree of horror that a voyager entertains for the sea-bottom. Yet for some time past he had been much in doubt as to the soundness of such teaching. There are some things more dreadful to suffer than others: slow torture than death by drowning, and social ostracism than social slavery, perhaps.

Conyngham Foxe was the last male of a long line of descent, which, tracing backward by way of William Penn, touched Adam. His elder brother, Montmorency, having married early, was gliding into life's shadow without a child. His sister also, being left a widow, had no wayward sons to regret. Therefore, unless Conyngham married and perpetuated the line, it died forever.

The event of his twenty-first birthday had bestowed upon him a country house surrounded by ample lands and a well-filled barn; also two hundred thousand in securities returning a liberal interest. But the preservation of the family honor, although a most laudable consideration, was not, in Conyngham's estimation, comparable in any degree to the joy of squandering a competency.

"If the family name is to be buried," he used to say, "we'll hold a king's wake over the corpse."

The wildness of his ways had induced his sober Quaker friends to solemnly believe that he was on the broad road to perdition. They passed him by, pointing over their shoulders with a significant shrug. His friends, however, who knew the man at heart, stuck to him with a grim disregard of sinister aspersions; for, having been once admitted to the inner sanctuary of his intimacy, they found they could not do less than die for him.

In the clubs no one doubted his standing. He had been admitted promptly on becoming of age to the Philadelphia, the Racquette, the Rabbit, and the Ayrmont Gun Club, together with several others of lesser mention. His most grievous breach of rules had been to enter the Philadelphia about nine one morning in evening dress; but the note of the secretary, brought to him just as he was indulging an eye-opener, brought forth repentance, apologies, and a more faithful adherence to the proprieties of life.

As a sporting man his success had been something to stand aside and wonder at. He aided and abetted, held stakes, timed, and refereed in all local set-tos where skill and prowess gave tone to the affair; he was unexcelled as a wing shot; had been barred from the club pool tournaments on account of his certainty in prize-winning; was a Delphic oracle at the Derby; and had even been seen coming away too near dawn from certain quiet sanctuaries of the green cloth, unknown to Mayor Stewart and his minions.

Socially, however, Conyngham was slipping his anchors. Where angels trod with deference he had jumped without a thought,—on the toes of the local society goddesses. They were hurt. They pouted,

and vowed that by the bones of immortal Penn they would wipe his name forever from their lists; but some way he repented not and gave no promise of reform. Then a few ventured to suggest that, for something they felt was in him, they ought to bear with him awhile, and endeavor to rescue him from the oblivion into which they felt this headlong downward career must surely plunge him.

He had been a member of the City Troop, that venerable organization of local patriarchs militant, until his repeated failures to attend drill had exasperated the ruling powers of that punctilious body to the verge of madness, and they requested him to resign. He did so, and buried his hopes of promotion in the cavalry; but the military spirit within him was in no wise quenched. Another year found him installed as captain and inspector of rifle practice in a city regiment of the guard.

Out of the depths of which sinecure office a diplomatic brigadier-general had reached downward and drawn him up, so to speak, to the right hand of the throne, remarking as he did so,—

"Foxe is wild and worthless, but rich and elegant. He'll make a first-rate aide."

But they were astounded on the staff not more by his nonchalance and lack of punctuality than by the excellent form of his uniforms and his knowledge of the minutiæ of tactics.

"Learned it at Chester,—and can't very well forget it," he explained.

And so on this night of the Charity Ball he was coolly contemplating cutting the entire engagement and pulling down upon his head a towering Washington monument of consequences. He sat before the grate, his hands thrust deep in his trousers-pockets and chin buried in bosom, watching the red light flickering on the polished tips of his shoes.

His student friend, Pilkington Sykes, home from Columbia for the Christmas vacation, was remonstrating boldly.

"Brace up, Foxie! You can't cut a Charity Ball, your nearest relatives, and two society queens without playing havoc generally. You can't back out now,—it's too late. I sent word for you myself that you would surely be on hand at ten-thirty. You make me out a fool or a liar if you don't go."

"Can't help it, sonny. I've cut plenty before this. What did they want to run me into it for? They knew I didn't want to go; they know I hate such things. I'd give a farm in Jersey if they'd kindly forget that I'm alive. Push the button!"

"But think of it, man! If you don't go they'll believe you're crazy, or, what's worse, an ass, or a cad. It's fearful, man! fearful to contemplate! What will Mrs. Rittenhouse think—and Mrs. Penn Gaskill Williamson—and Mrs. Pinckney Drexel! They'll all cut

you dead. They'll ask who the gentleman is when your name is mentioned. I know how it will be. It's fearful, man!"

"Sonny, be quiet! You're young and inexperienced. If those people had any notion of cutting me, they've had oceans of chances to do it already. I want them to cut me,—I want them to stop sending me invitations,—and they know it. There's a stack now in my club box three months old. Some day I'll have Patrick open them and make out a list of the people who ought never to speak to me. I know of three from the general in the lot,—he told me of them himself.—Come in, boy! What'll you have, sonny? Two Jamaica rum punches. And fly! Don't wait for the elevator! Three steps at a jump down and back or never enter this room again!"

"But you're not going to drink anything, man, before you go to the ball? You're crazy!"

"I tell you I'm not going to the ball. Balls are well enough for youngsters and society aspirants and swells, but I've had enough of them. Why, sonny, I'll be thirty-two in a week."

The defiant Foxe struggled to his feet and looked out of the window.

"Beastly night. I wouldn't wear an evening suit for a thousand dollars,—catch cold and die.—Come in! Boy, tell them to spread that on my private ledger,—and here's a wheel for you."

The college weakling was bracing his back against the door, barring the path of the bewildered Buttons.

"Foxie, I can't stand it! For my sake—for old time's sake—get into your clothes and go. Get there some way, and then if you must,—faint—have an apoplectic fit in the widow's arms—and get sent to the hospital. You must go!"

"Sonny, you're worse than the plague! Boy, tell Saunders to send up the likeliest kid in the house,—no, tell him to come himself! Run! skip! fly!"

"The youth on vacation fell on his neck and made arrangements for an embrace, which was frustrated by a dexterous back-trip that sent him rolling on the floor.

"None of your tricks, sonny! I'll go if it will make you feel *very* much better, but you needn't go wild over it. Drink that mixture. It will make your hair curl."

The head steward's tap was answered by a gruff "Come in!" and that pandering worthy's eye fell upon two punch-glasses projected against two upturned heads.

"Oh—ah—er—Mr. Foxe, did you send for me, sir? What will you have, sir? If it's a carriage, I fear you're most too late, sir. They're all at the ball by this time, sir."

"Saunders, you idiot! Gather your wits! I want you to do something, and do it yourself, and do it quick. Here's a twenty. Now,

call a four-wheeler—get in yourself—drive to the Paris laundry for my clothes—break into Reed's and get me a tie—fetch my evening suit from the tailors—you know, what-you-call-'em, on Chestnut Street, where all my work's done—get that new cape coat, too. Stop at Paddle's and get a pair of evening gaiters—and a pair of lavender gloves any place! Run! Don't lose a minute! Be back here by nine-thirty sharp!"

"But, sir—Lord, sir—I can't leave, sir. I'm needed 'ere, sir—and, it's very late."

"No 'but's!' Get out! Make your explanations when you come back. Do you take me for a Chicago pork merchant? Go! skip! and hold the carriage when you come back. You'll make what you can save out of that bill."

That would be a good deal, the excellent Saunders thought. He heard the last word going through the door like a shot.

"Great guns! Foxie! The man can't attend to all that in a week. Be reasonable at any rate."

"Shut up, sonny. I said I'd go to that ball to please you. Now let me go in my own way, for heaven's sake. There's oceans of time for getting ready for a ball."

The boy was looking out upon the street. The horses of the green car, struggling through the drifts at the intersection of Broad and Walnut, cast swirling clouds upon the pedestrians laboring by, with their heads pulled down into their coat-collars like misanthropic turtles.

"Foxie," he said, meditatively, "if you were to miss that ball to-night the town would be too hot to hold you. Broad Street in August will be chilly compared to it."

"There's Bermuda, sonny. Boat leaves to-morrow, and I've a standing invitation from the Grenadier Guards to come down any time. My health seems to need a change of air, too. But I'm going to the ball, I said. Keep your nerve steady."

"So is the William Penn statue going to the top of the City Hall tower."

A bell-boy tapped and entered.

"Barbers all went home at nine, sir. Very sorry. Maybe I can borrow Mr. Lane's razor for you."

"Bring a razor or a barber in two minutes or I'll have you discharged. Wait! two whiskies and a siphon,—ice in the glasses! Run! fly!"

The youth from Columbia nursed his leg and gazed disapprovingly upon the unreasonable Conyngham from the edge of the sofa. Then he went softly to the bath-room and turned on the warm water. At that moment the bell-boy returned with a much-used razor.

"Where did you get that antiquity?" inquired the donee.

"All I could get, sir. Mr. Lane inquired particularly if it was for you."

"You brazen dissembler! Why didn't you bring a bread-knife?"

It was one of those trials to which one must submit with fortitude. A visit to an outside barber was urgently necessary, and a boy was dispatched to reconnoitre. He returned reporting an ancient colored man still on post at Fifteenth and Sansom, and was promptly dispatched back to occupy and develop that enemy's attention until Conyngham arrived. It was better economy to dress first and be shaved afterwards.

At ten o'clock Saunders returned red in the face and very much out of breath, convoyed by a squadron of bell-boys with bundles. One seized the shirt and inserted the studs. Another laid out and smoothed the dress suit. Still another aided Conyngham in disrobing. At ten-fifteen he was all that his tailor could wish to look upon before dying,—with the single exception of tonsorial finish,—and he descended in the elevator and embarked for the barber's. There was some delay. The driver, having learned that he was serving Mr. Conyngham Foxe, had crawled into his vehicle and was already asleep on the seats.

The colored barber complaining of rheumatism and family cares, was delighted to have the "honah of sarvin' sech swell gemmen;" but he was careful to state that his shop at that time was running on a cash basis, paying and receiving pay as it went. No doubt he had observed a tendency among gentlemen in dress suits to forget their pocket-books and their small change. Only stress of weather had delayed him in his shop beyond the hour of nine. He had not shaved "sech ag'eeable gemmen sence he las' shave Gineral Grant," he explained, however, as he clutched a dollar for his pains.

On returning to the carriage at ten-forty there was another delay and a parley concerning the next halting-place.

"You ought to go right away, man. I'll get out at the Bellevue, and you drive right on like you were going to a fire. You'll keep them twenty minutes at least as it is."

"Plenty of time, sonny. They're in no special hurry. We'll just drive to the club and see if Parkinson's there. He'll want to see me after the ball, and we might as well make a date now.—Driver! Thirteenth and Walnut." The carriage-wheels creaked through the frozen snow, and the horses' hoofs stirred up clouds that took away the breath of the pedestrians.

Entering the club, the head porter touched Conyngham on the arm.

"Mr. Foxe," he said, excitedly, "there's a man been lookin' for ye with a message. I sent him to the Saginaw. He says it's very important, sir, and he's to come back here if he don't find you."

"Be up in the reading-room.—Ah, Parkinson, just the fellow I want to see.—Sonny, it's too late to go to that beastly ball now. I'd

rather not go than be late. You get in the carriage and drive to West Logan Square yourself. Tell them that very important business has detained me. A detective from London—case that demands the utmost secrecy—must return to New York to take steamer by midnight train. Make it sound well. Hurry back and meet me here." And the socially condemned took passage by elevator for the library.

Pilkington Sykes clambered back into the carriage grumbling lamentations unfit for historical preservation. He felt sure it was the last time he would ever stand by Foxie in a social peril. He could stay with him through any other crisis, but never again where appointments as escort had anything to do with the matter. He was bearing Conyngham Foxe's social head to the basket, and would probably be chief mourner at the funeral. A blooming termination to a holiday vacation.

Foxe was boring himself with the newest number of *Life* when the messenger returned with the note. By the time he had read it through to the signature the Charity Ball and all things thereunto pertaining were obliterated memories. It was from General Porter, and read,—

"Telegram from the governor orders the command under arms at once for the coke regions to suppress riot among strikers. Am confined to bed by temporary illness, and since assistant adjutant-general is out of town, I desire you to assemble the staff and issue all necessary orders in my name. Everything depends upon your promptness and judgment. The brigade should depart by early trains in the morning. I send to you as you are usually unoccupied. Report receipt by this messenger.

"PORTER,
"*Brigadier-General, Commanding.*"

Here was something truly worth an effort. He seized a pen and wrote,—

"Everything will proceed as you direct. Brigade will leave Broad Street Station at eight to-morrow morning. Special car on last section for the staff.

"FOXE,
"*A.D.C.*"

"What's the use being on the staff if you can't ride in a special car?" he thought. "Here, boy; take that and run. You may save a life if you hurry."

Eleven P.M., half the officers at the Charity Ball, the rest asleep, and a brigade of twenty-five hundred men to be turned out before seven o'clock in the morning!

"Thomas, ring up a cab!" he called, sharply, and turned again to the writing-desk.

"For staff-officers, regimental commanders, and field officers, this," he muttered.

"Your regiment will be formed under arms at the armory by 7 o'clock A.M. to-morrow, the 10th inst., with full field equipment and rations for three days in haversacks. From the armory you will march to the Broad Street Station, forming on arrival there as directed by the staff-officer in waiting. By eight o'clock you will be embarked and *en route* for active service in a region to be announced later. Report receipt at once to head-quarters, City Hall. By command of Brigadier-General Porter.

"CONYNGHAM FOXE,
"*A.D.C. and A.A.A.G.*"

"No cab, sir; sorry, sir; every wan out," interrupted the porter.

"I'll have to walk, then. Bring my overshoes and that fur-lined coat hanging in my closet. Hurry!"

Five minutes later he entered the office of the Western Union Telegraph Company at Broad and Chestnut.

"How many messengers have you ready to go out?"

"Ten, sir."

"Let all of them go with me; also an operator who is a typewriter copyist."

"Right away, sir?"

"Right away. Tell them to come with me. They may not be back before morning, but they will be well paid. That's my address."

"Certainly, sir," said the clerk, glancing at the well-known name.

Messenger's fees were not usually paid in bills, and ten dollars would not go far, either. The only place where coin could be had at such an hour were the restaurants and bars. He crossed to Steele's,—they knew him there.

"Can you let me have a hundred dollars in silver," he asked of the bartender, who was grinning broadly at the procession of messengers filing through the door. He thought it was one of Mr. Foxe's queer freaks.

"Certainly, Mr. Foxe. Going to treat that crowd?"

"Not right away,—not before they earn it," he said, filling his pockets with coin.

The snow was whirling under the dark archways as he led the little squad struggling through the drifts to the unfinished western gallery of the City Hall. The floors were not laid, no lights were burning, and no watchmen stood guard over that part of the building. It was very dark, very quiet, and very cold there. He

opened the storm-door of the head-quarters office with a latch-key. It was one of those locks that work with either key or combination, whichever one you choose to be troubled with. He lit the gas, and showed the operator a typewriter and a telegraph relay.

"I had that wire cut in here some time ago," he explained. "Thought it might come handy some time or other. I want you to make fifteen copies of that order as fast as ever you can." He laid before him the order he had written at the club.

Then turning to the sleepy messengers, he said,—

"Wake up, boys! I want you to make records for yourselves to-night. I have an important message for each one of you to deliver. You are to hunt for your man and keep on hunting till you find him. Then you are to bring his answer back here. I'll wait for you, and every boy that kicks a goal will get five dollars down for his valuable exertions." He rattled his pockets significantly. The boys were wide awake enough now. Five dollars was an independent fortune to every one of them.

He took the copies from the typewriter and addressed each in bold characters, writing "Report receipt by this messenger" plainly on the face of each. In ten minutes the boys were fighting the storm, hunting up regimental commanders and staff-officers.

"If they don't find them at home," he thought, "they'll catch them on their way back from the ball."

There were other messages to send before the machinery of the brigade could be set in motion. The telegraph-operator would have his hands full.

"Get your central office and hold it," he said. Then wrote,—

"You will report with all men of your company under arms, with full field equipment and three days' rations, at the armory before seven o'clock to-morrow morning, the 10th inst., preparatory for leaving the city for duty under orders of the governor. By command of Brigadier-General Porter.

"CONYNGHAM FOXE,
"*A.D.C. and A.A.A.G.*"

This was for the non-commissioned officers, whose addresses were carefully kept by roster.

"Repeat this message to every name on that list," he said. "It will probably keep you busy awhile."

The operator knew his business. He sent the message, then the list, and let the central office do the work. He had been a messenger before he learned the sound code.

The trains had to be gotten out. He made a list of the Pennsylvania officials from the president down to the yard-master, and penned an inverted round robin for them.

"Brigade ordered to coke regions, to quell rioters. In case you have not been notified by quartermaster-general, we need four trains, fifteen cars each, ready to leave Broad Street with troops at eight to-morrow morning; one Pullman in every five coaches. Will direct embarkation in person.

"PORTER,
"*Brigadier-General, Commanding.*"

The coke interests and the railroad interests were not widely separated. The brigade would leave Broad Street that morning if nothing else did. There was no doubt that the trains would be ready. Certain expressions of official good will had been received at head-quarters before.

The room was cold and cheerless, no fire, only one jet of gas. There was no furniture but the tables and the tier of closets ranged around the sides of the room, where the staff-officers kept their uniforms and swords. No sound broke the stillness but the sharp clicking of the telegraph relay. Conyngham put his feet on the table and settled back into a chair. He must wait for those boys. It would never do for the frozen little waifs to be disappointed when they returned, and the operator would surely leave as soon as his last message was sent. But there was really plenty of time before he would have to be at the railway station to direct the embarkation. His uniform was at the club, and the liquid rations for the trip had to be ordered, but it was only a little after midnight. He hoped everything would run smoothly. He hoped it would, but there were misgivings; the brigade had never been hurried like this before.

The clicking of the instrument was soporific. He heard a deep toned clock bell strike one, and fell dozing.

The next fact that forced itself upon his consciousness was that some huge hand was shaking him roughly by the shoulder.

"Wake up, will you!" growled a surly voice.

He struggled to his feet. A heavy, stoop-shouldered man, with dark, sunken eyes and a full beard, was glaring at him from beneath the rim of a grimy silk hat of ancient pattern. He looked like a heavy villain running loose from some neighboring theatre.

"What are you sendin' out those orders in Gineral Porter's name for? I know you, Major Foxe. You sent me to jail for runnin' off with your horse last camp, an' had me dismissed in disgrace from the regiment, all along of a little fun. Your tryin' to git the troops down a-fightin' with honest laborin' men that wants fair pay for an honest day's work. Yer a slik, palaverin', lazy aristocrat,—too lazy to do anything yerself, an' too stingy to want an honest laborin' man paid full wages. But it's man to man here. You an' I are equal in this deal. You sit down there and countermand those orders or it's all

day with you. I'm the man that can make you do it, an' you might as well settle down quietly to business."

There was no dream about this. The man was the same he had ordered into arrest at the camp,—and he was giving him orders. His tone, his manner, his words, were the refined quintessence of impudence. As the fellow talked he collected his scattered senses.

"What have you to do with any orders I give?" he asked, waving the intruder back with his hand. "You are drunk; possibly crazy. At any rate, you are laboring under a tremendous delusion if you think you can enter this office and carry on to suit yourself. There's a door behind you, and it opens from the inside. You get the other side of it in three seconds or I'll put you there!"

"Not so fast, my young buck!" the man answered, edging back a little. "I'm a member of the Amalgamated Coke Association, an' I've got plenty of backin' in whatever I undertake. You might jest as well do what I tell you without any fuss, an' save doctor's bills—possibly funeral expenses, an' mournin' for yer wife. I'm here to stop this shipment of soldiers, an' it's got to stop."

"What in the blooming, howling, jumping blazes do you take me for!" cried Conyngham, throwing his overcoat on the table. "Face about and get through that door before I count three or I'll turn your corpse over to the police!"

The man didn't seem to electrify worth a Chinese cent piece. He was preparing for fight, not flight. There wasn't a weapon in the building more deadly than a staff sword, and that wouldn't kill a consumptive mosquito. He would be forced to descend to vulgar fists. The prospect was acquiring considerable gloom, but Conyngham took up a sparring attitude and watched his opportunity. The man backed away and waited.

But he did not wait long. The man made a lunge to strike him, but instead cushioned the blow of a tolerably hard fist somewhere between the eyes. He appeared used to that sort of massage. He only backed away and made another lunge. This time his foot caught something and he fell over against the table.

After this brief skirmish of the outposts the reserves were drawn into the engagement. The representative of the Amalgamated Coke Association drew re-enforcements from cover in the rear, and dealt so heavy a blow on the head of his dandified opponent that the latter dropped like a bale of hay, and spread his shining shirt front and delicately adjusted tie all over a very dirty carpet. There are times when a loaded billy is a most trusty weapon.

This part of the work was done as well as his most influential constituent could have wished. The orders were not exactly countermanded, but the fur-lined overcoat would make up for that. And there was coin in the pockets! He started to leave his own ragged ulster, but profit-

ing by a wiser second thought, returned and took it with him. The face on the floor was very pale. The billy had cut the scalp, and blood was oozing from the wound. The representative thought he might have killed him, but there was no time for investigations. The interests of number one required immediate attention, and there was an early train for the coke regions. It left in ten minutes.

In the house on West Logan Square Mrs. Montmorency Foxe sat tapping the tiling with the toe of her slipper, veiled, gloved, and bundled to the ears. Mrs. Rittenhouse, from a seat on the opposite side of the grate, was turning into her daughter's eyes one long earnest gleam of unutterable disgust.

"Why doesn't the man come? What on earth can be the matter? It is already almost eleven! He might at least have sent a note. I knew he was careless, but I never believed him utterly lacking in every evidence of good breeding!" stormed the elder Rittenhouse.

"Some time, mother, during a lucid interval, he may apologize," suggested the daughter. "The disease is not incurable."

"There are no doubt excellent reasons for his tardy appearance, Miss Rittenhouse," retorted Mrs. Foxe, taking exception to the final aspersion.

"Most excellent, no doubt," nodded the mother. "A brief note delivered by a messenger would have prevented our sitting here for an hour wrapped to the tips of our ears."

Ting-a-ling-a-ling! away back in the passage.

A servant entered bearing a card.

"Now, ladies, do try and look severe," suggested Mrs. Foxe, beaming with triumphant sarcasm, and gathering up her skirts. "Wither him with a glance the moment he enters!"

But the card read, "Mr. Pilkington Sykes, Columbia College."

"Of all others! Show him in."

"Ah—er—ladies, good-evening! Mrs. Foxe!—I regret to be the bearer of bad news—but Mr. Foxe was on the point of starting here when he was called upon by a gentleman on very urgent business—very important business—gentleman from London, to return by steamer to-morrow morning—and he begged me present his most humble and sincere apologies."

"Indeed! By you. Why not by a messenger? You left him at the club, no doubt.—Mrs. Rittenhouse, Mr. Sykes."

"A-h-h! Some friend of Mr. Foxe." Through the lorgnettes,—"Most honored to meet you, sir. Tell Mr. Foxe, when you return to the club, that we had not thought of going to the ball after hearing that he had been selected as our escort. He has not inconvenienced us in the least. There is nothing to warrant his apology.—Mrs. Foxe, if you will excuse us, my daughter and I will retire to our rooms."

With a sweeping bow the twain glided majestically down the length of the drawing-room and disappeared through the drapery.

"Oh, Mr. Sykes! How could he have disappointed us so!" moaned Mrs. Foxe. She was ready to weep.

So was Sykes. He felt that further delay on his part might not prove agreeable, so he bowed himself backward through the door, and rolled back to the club.

"That's the way they treat a fellow who is not used to lying," he muttered to himself. "A flat prospect now,—flat as the house-tops from the Art Club roof garden."

The porter told him that Mr. Foxe had left the club on business and would be back soon. "He said you was to wait here, sir." So he waited.

Twelve o'clock,—playing billiards. One o'clock,—just going down for a cup of coffee and a liqueur. Two o'clock! What on earth was the matter with Foxe! He called a carriage.

The porter did not know where Mr. Foxe had gone. Inquiry by telephone to the Bellevue returned in the negative. Mr. Foxe had gone out without a carriage. It must be staff business. When he played major he would go anywhere under any conditions. It was the only thing that shook him out of his lazy habits.

"City Hall—west entrance!" he called to the driver. "I'll make sure about head-quarters before I go any place else."

Hurrying through the dark hall-way he almost fell over two messenger-boys. They had been trying to open the outer door.

"Mister, they's a bloke in there some place 'as promised us a fiver apiece if we'd take a letter an' bring him an answer. An' now we's run all over the city and most froze ourselves doin' it, he's got us locked out." The little fellows were shivering and their voices trembled weakly.

He must have been there and gone. The door was caught by a spring combination lock, and Sykes knew the combination. He used to loaf in there mornings to read the papers. He lit a match, turned the knob to the proper point and opened the door, the boys at his heels.

A man in an evening suit was lying opposite the door face downward looking very white and death-like about the ears, and blood was flowing from a cut in a forehead that belonged to no other than Conyngham Foxe. Sykes suspended breathing operations a few moments, but had sense enough left to whisper to the messengers,—

"Here! You youngsters grab a leg apiece and we'll put him in the carriage. There's nothing to be done here. If he's not dead, he's almost frozen. Easy, now!"

Conyngham made the journey to the carriage and back to the Bellevue much as any dead man would have made it. Ready hands

enough were there to bear him to his room and stand horrified around the bed. But he was not rigid enough for a dead man. Sykes demanded restoratives and a physician. The shiny shirt bosom was hopelessly stained, and for a man on the point of attending a Charity Ball Foxie presented a most miserable appearance.

The rubbing and brandy soon had the desired effect. He opened his eyes and began to look hostile. His intellects had resumed operations on a thinking basis.

"Where's the honorable representative of the Amalgamated Coke Association?" he asked. "That's what a fellow gets for saving a rascal from the penitentiary. I ought to have let him go up last summer when he ran off with my horse. Now he comes back and slugs me. Oh, sonny, did you pay those boys? I've got to be at Broad Street Station at seven o'clock to see about those trains. Let's have a little terrapin and Duff Gordon and call it late dinner. You oughtn't let that ex-veteran get away. A little solitary meditation will do him good. Fellows! we ought to go down now and get a small lunch."

But the doctor vetoed the proposition, and motioned the reviving attendants to go out. Then the doctor and the Columbia infant removed his party dress and arrayed him in garments better suited to a fortnight in bed, and the Columbia infant resolutely mounted guard over him. Foxie began to feel tired and weak, and thought he would go to sleep. The doctor went out, forbidding visitors and prescribing quiet and hospital diet. Afterwards Foxie was glad he did.

Every one has followed the movements of the brigade from the time it assembled at Broad Street Station, all through the coke regions, to the hour of its return. Every one knows how the governor's telegraphic order for troops was sent from Harrisburg at ten o'clock one night, and before the same hour of the next his entire division was encamped in the coke regions. It was the most phenomenal mobilization in the history of the guard. Familiar as a fairy-tale—to every one who reads the newspapers.

And the Philadelphia Brigade, although farthest from the scene of the riot, was first to arrive on the ground.

Conyngham Foxe was absent from the assembly of the staff at the railroad station, and the special car was obliged to roll away without him. Every man of them had said Foxie would never make a soldier, and this was a clincher; now they knew of a certainty whereof they spoke. The general being a taciturn man, and not given to talking except on official business, was rarely approached on moot social points, and had given no opinion concerning the cause of Foxe's defection. This the able members present for duty understood as a sign that he was properly ashamed of having been persuaded for social reasons to appoint an aide-de-camp so completely unfitted for the duties of an

officer. Major Foxe's resignation would certainly be forthcoming, and they disputed among themselves concerning his probable successor.

The brigade had put down the insurrection and had returned before Conyngham left his bed in No. 14 of the Hotel Bellevue. Sykes report of the conference at West Logan Square had decided him to pass the period of his convalescence at the island of Bermuda. The hotel was as good a place as any to start from; there was no use in being sent home. Pilkington Sykes decided to cut the spring semester as far as the Easter vacation and go also. He had been present at the execution, had assisted in the funeral services; it would never do to desert the body at the entrance to the cemetery.

They were at the wharf of the steamer watching the last of the baggage ascend the plank. The great whistle had already sounded warning visitors to quit the decks, and it was time to go aboard. The mate above was motioning them to hurry.

Conyngham hastened a little, and in doing so almost ran into the arms of a lady who, with her daughter, was just descending. He started back, tipped his hat, and begged pardon involuntarily, without raising his eyes. What was his surprise, then, to be addressed in the most cordial manner,—

"Oh, Mr. Foxe! I am so glad to have seen you before you left. We saw some friends away and felt sure we would meet you. You do not know how sorry we have been about your dreadful accident. We have sympathized most truly ever since Mr. Parkinson told us about it. Do be careful of yourself, and come back well as ever. You must come right up and see us the day you arrive."

All this was poured forth while Sykes was backing up the plank, and Foxie was bowing and blushing, and the daughter was smiling and warbling little chirps like a canary-bird of, "Yes, Mr. Foxe, indeed we do!" and "We are so sorry," and so on, and the mother talking a little louder and a little louder as Mr. Foxe was receding politely in the wake of the dumfounded Sykes. So they waved their handkerchiefs from the deck as the steamer backed off, and Mrs. Rittenhouse and her daughter beamed upon their diminishing figures a mellow gaze of regretful radiance as if they were taking leave of their next of kin.

And Sykesey said to Foxie, "If signs and wonders have anything to do with the matter, your grave will probably be kept green. There will be a resurrection in about six weeks, and your late lamented social corpse will gather its dry bones and rise again."

And Foxie said to Sykesey, "There is no death,—no social death."

ALVIN SYDENHAM,
Lieutenant U.S.A.

AMONG OUR CONTEMPORARIES.

As the memory of "Napoleon the Little" dies out the *culte* of Napoleon the Great seems to revive, and new books illustrating or reflecting his career are as much sought after as if his biographies did not in themselves constitute a library.

In this connection a rather curious book has lately been published in Paris, entitled "Napoleon à Sainte-Hélène. Rapports officiels du Baron Stürmer, Commissaire du Gouvernement Autrichien. Par Jacques St. Cère et H. Schlitter." M. St. Cère says, in the *avant-propos*, "The documents given in this volume have been published at Vienna, by H. Schlitter, with the authorization of the Austrian government. They were found in the secret archives of the Imperial Court at Vienna, a collection which contains so many documents of the highest historical importance, and which has—with a liberality the editor would like to see imitated elsewhere—been placed at the disposition of those engaged in literary investigation." M. St. Cère, therefore, translated H. Schlitter's work into French, believing that it would interest Frenchmen, and be a real contribution to the history of Napoleon.

The appointment of commissioners of the Allied Powers to certify to the safe-keeping of Napoleon in St. Helena arose in this wise: Prince Metternich, having written from Paris to the Austrian emperor that Bonaparte was on board the English line-of-battle ship, a prisoner, and that they might henceforth hope for peace, was replied to by Francis, in an autograph letter, on the very same day, declining to be satisfied that peace was yet guaranteed. Francis gives his reasons for uneasiness, stating, among other things, that although the French had lost confidence in Bonaparte they still greatly feared him, and that no confidence was to be placed in the French Bourbon government. In fact, the Austrian emperor saw all sorts of dangers so long as there was a possibility of a return like that from Elba. However, after various propositions,—one of which was made by Lord Liverpool, to the effect that Louis XVIII. should take Bonaparte and have him shot,—the convention of August 2, 1815, provided that "the Imperial Courts of Russia and Austria, as well as the Royal House of Prussia, should appoint commissioners who should proceed to the place of detention fixed by his Britannic Majesty for the detention of Napoleon

Bonaparte," to "assure themselves of the presence in such place of the said Bonaparte, but being in no way responsible for the manner of his detention,—*la façon dont le prisonnier sera gardé.*" In conformity with this article, Baron Stürmer was nominated the Austrian commissioner. He was ordered to have no communication with the ex-emperor or his suite; but the instructions of the other commissioners, especially of Count Balmain, on the part of Russia, were more liberal and looked to personal reception. The commissioners arrived in St. Helena in June, 1816, and at once demanded that Sir Hudson Lowe should give them the opportunity of personally assuring themselves of the presence of Bonaparte upon the island. But Napoleon absolutely refused to receive the commissioners in their *official* character. They had interviews with Bertrand, Montholon, and Gourgaud, and some of them met Bonaparte unofficially, but not Stürmer; but their position was far from agreeable, for they had nothing to do officially, and only had to cool their heels in this out-of-the-way spot, pick up gossip, and write it home. Stürmer's letters to Prince Metternich form the staple of this book in question. Some of the matter is not, as the newspapers say, quite "fit for publication," but most of the gossip is harmless. Still, it is curious as showing the feelings as well as the manners of the period, and therefore worthy of being read by those interested in "choses Napoleoniennes." Most histories do not mention the existence of such commissioners at all.

At last, in October, 1817, the fussy diplomat was relieved from his banishment, to his great delight, Prince Metternich having represented to the Austrian emperor that "the sending of a commissioner to St. Helena, which the political situation had rendered necessary in 1815, was, on account of changed political conditions, no longer of importance; the mission was an expensive one, and financial considerations suggested the suppression of the post. "I therefore humbly propose to your Majesty to recall Baron Stürmer, and to nominate him for the position of consul-general to the United States of North America." If the baron was as active with his ears and his pen during his stay on these shores as he was during his fifteen months in St. Helena, the Austrian archives must contain much gossip which would be "mighty interesting reading."

Admiral Malcolm, who succeeded to the naval command at St. Helena after the ex-emperor had been some months there, seems to have been a prime favorite with Napoleon, who saw him frequently. The admiral repeated to Baron Stürmer some of the conversations, and Stürmer reported whatever he heard, sometimes at third hand. Here is a conversation between Napoleon and the admiral:

B.—"Are your people going to keep me here always?"

Adl.—"I think so."

B.—"But you have other colonies?"

Adl.—"You would not be comfortable (*vous n'y seriez bien*) in any respect."

B.—"What they are doing here in St. Helena is absurd, ridiculous. Now, look at that soldier, perched up on that point of rock, what good is he there? Do you fear that I will make my escape? Why, a bird couldn't escape. I believe that I am forbidden to go down into the town, and that is natural enough; but outside my movements should be perfectly free."

Adl.—"Your movements are free; no one hinders you from going down into the town."

B.—"Yes; with an officer (Captain Popleton) at my heels. No; that would humiliate me. They would take me for a prisoner, and I am not that."

Adl.—"Yet we cannot treat you as a sovereign."

B.—"And why not? They ought to see that I have certain honors as a solace (*amusement*) to a person in my position. What harm could it do, on a bare rock like this?"

Adl.—"You consider yourself as still an emperor, then?"

B. (After a moment's reflection.)—"No; I have abdicated."

Adl.—"You do not wish to be called general?"

B.—"I have not been a general since my return from Egypt. Any other title would suit me. Suppose they call me Napoleon."

They then passed to the intended invasion of England. The admiral said, "What was the real intention of your great preparations at Boulogne?"

"To cross my forces over the Channel."

"Then the conquest of England appeared an easy matter?"

"No; not at all. But it seemed worth trying for."

The admiral remarked that they had never been able to make out what his plans were exactly.

"Oh," said Bonaparte, "they were simple enough. My fleet was to embark a force of troops and make a feint of sailing for America. I was sure that the bulk of your fleet would follow them. Then Villeneuve was to profit by the first opportunity,—of which the sea affords so many,—give your fleet the slip, and get back to the Channel, probably two weeks before the English admiral would do so: there he was to cruise while my boats passed over."

At this interview the ex-emperor talked of the execution of the Duke d'Enghien, of the Prussians, and about Russia, and then came to the subject of Waterloo, saying to Malcolm,—

"Do you know that Wellington took great chances there? He ought to have retired and waited for the allies. Without the assistance of the Prussians he was lost."

"Yes; but he was sure the Prussians would come."

"How could he be certain of that? If Grouchy had done his

duty, we would not have been left in the condition we were. It was due to Grouchy that all was lost."

"What caused you to open the campaign by an attack upon the Prussians? The position of the English army was certainly much—a much more embarrassing one for you. They were defending the sea-coast and the ports (*la côte de la mer*), and it behooved you to make yourself master of them."

Bonaparte replied,—

"The character of the generals opposed to me, as I understood them, influenced my conduct. That drunken hussar, always ready to rush into a fight, would have abandoned everything (*eut tout quitté*) to come to the succor of the English, and I should have had too many on me at once. I had commenced by weakening his force, and had beaten him. His army was in disorder. Grouchy ought to have prevented him from further interference. But my orders were not carried out, and the results I anticipated from them did not follow. But still, though the Prussians accomplished a good deal, the honors of the day were with Wellington."

In his dispatch of 2d September, 1816, Baron Stürmer gives a detail of the ex-emperor's daily life. It is from hearsay, but we may be sure that gossip went into particulars at such a time and such a place. The baron says (we translate freely),—

"His mental balance is very unequal, but he does not show in his appearance any trace of mental trouble. He seems always to be well, and promises to live a long time. No one can tell whether he is resigned to his fate or whether he has aspirations for the future. They say that he has great hopes that the Opposition party in England will enable him to leave St. Helena. Certainly, at least, he still protests against his arrest, and at Longwood insists upon being treated as an emperor. Bertrand, Montholon, Las Cases, Gourgaud, and all his suite continue to render him the same respect and honors as they would have done in other days. He receives those strangers who may wish to pay their respects, but he never invites any one to a dinner or *soirée*, and never leaves the boundary of his inclosure, because he does not choose to be annoyed by the presence of an English officer, whose duty it would be in that case to accompany him. For the same reason, when taking exercise he avoids passing all posts or sentinels. He rises at noon, has breakfast, and then occupies himself in various ways until three o'clock, at which hour he admits, four at a time, people who may call. He often walks after that, or drives in a *calèche*, with six horses, rarely going on horseback. He dines at eight, remaining at the table only three-quarters of an hour, plays a game of *reversis*, and then goes to bed, but often rises during the night to write. He is writing his own history, by the aid of the *Moniteur*, and is also learning English. His conversation would be interesting if one could follow

him, but that is hardly possible, because he flies about from one subject to another. Habitually he sees only his own French followers, and rarely any English. General Lowe shows him every possible consideration, and, to a certain extent, yields to his mania for being treated *à l'empereur*. But in spite of this he does not like him, and has only seen him two or three times. He seems to like Admiral Malcolm, who plays to perfection the part of a good fellow, but who will no more depart from the orders given him than the other."

Perhaps it may be thought we have given a little too much of Stürmer, whose reports have been buried in the Austrian archives for eighty-seven years, but those interested in the matter may check the other accounts of Napoleon at St. Helena by means of the gossip of the Austrian commissioner.

In a late number of the *Journal of the Military Service Institution* we have some further light thrown upon the Indian as a soldier, a subject which has great ethnological interest, beside its practical bearing. Lieutenant Vance, of the Eleventh United States Infantry, gives his experience while serving with the Indian company at Fort Apache, Arizona, and, in discussing the adaptability of the Indian as a soldier, first considers his character; and in doing so, seems to speak of the Southern Indians exclusively, for he incidentally states that his company embraced members of the Apache-speaking tribes, the Tontos, San Carlos, and Coyteros, as well as the Yumas and Mojaves, who speak an entirely different language.

Lieutenant Vance considers all these Indians "remarkably intelligent, with exceedingly clear ideas of justice, a very tenacious memory of wrong done him, and a very poor memory for favors." The writer goes on to say that he supposes that they have, among themselves, a proper code of bearing, as man to man, but that in their hearts they regard the whites as their natural enemies, and take from them anything they can get. In his natural state the Indian "is the most natural being on earth. He does not try to conceal his vices and takes no credit to himself for his virtues, of which he has a good many." Mr. Vance does not think that the prejudiced average Arizonian would agree with him in the latter opinion. He says that he has always found the Indian particularly frank and honest, always admitting when he has done wrong, and taking his punishment as a matter of course. In case of a row or disturbance, "the truth can generally be ascertained from the man at fault himself. It is only when a white man is involved that the investigation becomes complicated."

During Mr. Vance's eight months' service with his Indian company he has not, he states, had a single case of theft to deal with,—showing a very clear idea of the property rights of other people. "But, on the

other side, he is indolent, improvident, and I am afraid utterly unreliable." This is equally the case with those who have been sent East to school, and no amount of education seems to give them an ambition to better their condition. "He sees what education has brought the white man to; but he reaps very little benefit from it, and returns to his 'C' string and indolent life with delight. Such benefit as he has derived from education soon disappears."

When the novelty of the life wears off (in the case of those enlisted in the army), they find too much work, and are anxious to get out. They don't look into the future, or consider how well off they are,—much better than they have ever been before. At present they know that they have too much drill and fatigue to suit them. And why should they be hampered in this way, when they can go back to their reservation and draw a pound and a quarter of beef, and flour, coffee, and sugar in proportion, for the rest of their lives?

Before an Indian can become a soldier he has—coming from a savage state—to learn everything pertaining to civilized life, in addition to his military duties. He must learn to speak English, how to cook, how to eat, how to wash, how to take care of his clothes, and last of all, how to drink beer without getting drunk.

"The latter is the most difficult of all their duties. Besides requiring a high degree of civilization, it requires long and most diligent application, and a great many highly-educated white men go through a variety of vicissitudes before they can learn it. But they wrestle with the problem manfully every pay-day, and some of them have arrived at such a state of perfection as to be able to get through an inspection with as many as three bottles aboard."

"In regard to their other duties, the great trouble is not in teaching them, for they are wonderfully bright, and pick up everything with great rapidity, but in keeping them to a performance of their duties after they have learned them. To do this they have yet to be constantly kept under the eye of a white man. In speaking of their brightness I ought to add that this applies only when they are being taught their strictly military duties, in which they all take a lively interest. In teaching them duties which require much manual labor, such as scrubbing, cooking, etc., the gleam of intelligence dies out of their eyes and you have to deal practically with idiots."

There is much more of general interest in this paper which we would gladly give if space allowed, especially in regard to the operation of the "canteen" with the Indian soldier. Those interested must read it for themselves.

From time immemorial valuable blades have been carried in wooden sheaths, no matter how much gold and silver and precious stones may have adorned the wood: the blade was the true jewel, if it was one of

the historic swords we read of. Whether the Russian cavalry sword-blades are of the true stamp or not we do not know, but a recent order in regard to their sheaths would seem to argue that they are worth taking care of, for by the new year fifty thousand sheaths of a new pattern are to be issued. These are of wood, covered with a new prepapation of India-rubber, hardened, in lieu of leather, which is at present in use. The preparation of caoutchouc is the invention of a Russian mining engineer, and the manufacture is carried on in the Imperial armories.

The experiments made with the new sheaths are said to have been exceedingly satisfactory; neither the heat of the sun, nor frost or humidity, seemed to exercise any bad effect upon them.

It is hardly worth while to say that they have great advantage over the metal sheath in keeping the cutting edge in order and in comparative lightness, while they cause none of the noise made in marching by the usual metallic sheaths. We believe that the "tucking in" of the sabre (when carried at all in serious warfare) was suggested by this noise, which with a good number of horsemen would announce their coming at a considerable distance.

The report of the referee or arbiter in the Italian naval manœuvres, which occupied a month, is referred to in the *Revue du Cercle Militaire.* Admiral Amezaga congratulates the Italian navy upon the result.

Among other points the admiral has a little slap at the "Camperdown"-"Victoria" affair by stating, "That no disaster occurred in our fleet, which consisted of eighteen line of battle-ships, four torpedo-destroyers, and fifty-four torpedo-boats, which manœuvred day and night for an entire month, is a gratifying thing to state."

Among the ships were the "Duilio," "Lepanto," and "Re Umberto," among the most enormous of modern ships of war. It certainly speaks well for the ability with which the ships were handled that no collisions occurred, although the manœuvres took place at the time when fine weather may always be looked for in the Mediterranean.

The necessity of constant increase of the navy as well as keeping up a large army must be a tremendous tax upon so impoverished a nation as Italy, yet they meet the inevitable with a good face; and the carefully nurtured hatred of France enables the government to make appeals to the Legislature which would be otherwise fruitless. But to return to the report, Admiral Amezaga says that "they, as well as all foreign navies, find how limited the sphere of action of their great ships is on account of the necessity of coaling so frequently." The admiral appears to have strong convictions on the subject of the substitution of the hydrocarbons for coal; and he seems to think that the

experience of the last manœuvres will lead to more general use of these. He says, "All our first-class ships carried a considerable quantity of *naphthaline*, a residuum of distilled petroleum, which they burned conjointly with ordinary coal. We have among our vessels at present only a few torpedo-boats making exclusive use of *naphthaline* for fuel, but we hope soon to increase the number. The hydrocarbons, including the ordinary oil used for lamps, have," the admiral says, "an immense future, especially in war-ships, where their heating power, the ease with which they are put on board, the simplicity of their use in combustion, their cheapness as compared with coal, and the diminution of the boiler-room force, render them peculiarly useful."

It appears from statements in French journals that tattooing is expressly forbidden in their navy, and some curiosity as well as surprise was expressed when it was found that the officers as well as the men of the visiting Russian fleet were often elaborately tattooed. In regard to this the *Army and Navy Gazette* says, "The *Temps* has recently given some interesting facts concerning the practice upon the authority of a Russian lieutenant, who himself is adorned on the right forearm with a magnificent red butterfly. The tattooing of the men may be roughly done, but the officers are operated upon in most cases by artists. Generally the midshipman submits himself to the ordeal during his first voyage. The relations between Vladivostock and Nagasaki were once intimate, and on the island of Inassa near the latter place is a Russian colony. Russian officers are often there during their cruises, and then it is that Japanese tattooers practice their art. Years ago one of them had the honor to adorn the Grand Duke Alexis with a splendid blue dragon, and thereafter tattooing became the fashion. The artist presents an album containing naval emblems, birds, animals, insects, and geometrical and other designs, from which a selection can be made. For an elaborate design the time of actual torture under the artist's needles may last two hours. The loss of blood is great, and the consequences are sometimes serious. Indeed, in the case of a young officer some ten years ago gangrene set in and death resulted. The visits of Russian ships to Inassa are not now so frequent as formerly, and though the practice of artistic tattooing still continues, it is scarcely so prevalent as it was."

How it may be now in our own service the writer does not know, but the sailors, both officers and men, used frequently to have most elaborate and extensive tattooing. Indeed, in the case of the latter, it was sometimes difficult in the *embarras de richesses* to select the most prominent ones for insertion in the "descriptive list." A favorite one was a ship under royals and studding-sails, occuping the whole chest. In the flogging-days one sometimes encountered spread across the blade-

bones in large letters, "Strike fair, you blank-blank!" In one ship in which the writer sailed a young man was very ill from blood-poisoning in consequence of the operation, which was easily traced to want of care and cleanliness in the operator, whose work was cut short, to his great disgust, for it was quite as lucrative a pursuit for one who had a reputation in that line as if he had been a good portrait-painter. But we never remember to have seen any extensive bleeding, perhaps because in the more elaborate cartoons the operation extended over many days, perhaps weeks, "owing to the exigencies of the service." On his own right forearm the writer bears a tattoo put on by a very dignified old fellow in white turban and long beard, who was the artist in Jerusalem some thirty years ago. It consists of the arms—crosses, crown, star, etc.—of the Holy City in a wreath, with "Jerusalem" and the date, all very neatly done. The operator told us that he had so decorated the most distinguished visitors; among others the Prince of Wales was mentioned, I remember. Most of our party were old enough to know better than to receive this indelible diploma certifying our visit, but we all did it, including our commanding officer.

In extenuation it might be said that visits to Jerusalem were not so easy or so common at that day. The ride was an undertaking to people fresh from shipboard, and at that time the country was unsettled in a political way, and brigandry was not unknown. The "Wady Ali" was purposely left in an almost impassable condition by the Turkish government, while the tracks upon the high land, after emergence, were in places dangerous. Now people go to the Holy Places in steam railroad cars.

In an editorial in Dr. Russell's paper, the *Army and Navy Gazette*, written at the time of Marshal MacMahon's obsequies, the following passage occurs: "A general officer writes as follows in reference to the death of Marshal MacMahon: 'Do you remember, when Blumenthal was at the Queen's Hotel, Farnborough, in 1871, the Duke of Connaught asking him what had most impressed itself upon him in the campaign of 1870? The reply was striking. Blumenthal said, "MacMahon's advance at the end of the day at Wörth. He came on as if he were leading victorious troops." The chief of staff of the crown prince's staff did not, however, say that MacMahon was the ablest French general opposed to the Germans. He gave that praise to Chanzy; when the Germans thought they had smashed him they found Chanzy was nearer to Paris than they were. Blumenthal also observed, in talking of the campaign, "No one knows better than I do how near the French were to winning the battle of Wörth. I always said that we *must* win the first battle, and I managed to get such a superior number of troops concentrated to do it." I must tell you a story of MacMahon anent Bazaine's escape. I went over to see the

island of St. Marguerite from Cannes with MacMahon some years after he had ceased to be president. We walked on to the terrace. A French subaltern showed us about, evidently having no idea who MacMahon was, and no one of the guard or soldiers recognized him. We were looking at the place where Bazaine got down, and MacMahon said, "How easy it was to do so," because there was an immense heap of rubbish and earth almost up to the parapet, when the subaltern said, "Yes, quite easy; but that is not the place." "Where was it, then?" said MacMahon. "Why, through that gate, of course!" The marshal said, "Who let him out?" "Why, the president and the government, of course!" You should have seen the marshal's face! He was awfully amused. We walked out of the guard-room and thanked the officer, when all of a sudden an old sergeant recognized the marshal, and before we got to the boat the whole garrison was lining the terrace or coming down to the quay to see the marshal. I pitied the feelings of the poor subaltern!"

Last fall the Trenton Battle Association dedicated a fine monument on the site of the battle of Trenton, an action which has been called, and not without reason, the turning-point of the war of the Revolution. On the very spot where Captain Alexander Hamilton (afterwards to occupy so large a space in the history of the republic, and destined to die by the pistol of one of equal ability, but less conscience),—on that very spot, we say, where Hamilton, under Washington's orders, posted his battery on the fateful morning of December 26, 1776, now rises a splendid shaft. To its erection Congress appropriated thirty thousand dollars, the State of New Jersey gave fifteen thousand dollars, and the rest of the required sum was raised by subscription. The governors and other high officials who were present on the occasion were escorted by troops from several States, and among others by the City Troop of Philadelphia, which was an active body at the time of the fight, which acted as General Washington's body-guard on the field of Princeton, and which is still in a complete and flourishing condition, having been in continuous and very varied service for one hundred and nineteen years.

On one side of the door-way of the monument, appropriately guarding the entrance, stands a bronze statue of Private John Russell, of the Fourteenth Regiment of the Continental Line, organized in Massachusetts by Colonel John Glover. On the other side of the door-way is the statue modeled after a likeness of Private Blair McClenachan, of the Philadelphia Troop of Light Horse, which troop, as we have said, took part in the battle at Trenton. The troop was at that time commanded by Captain Samuel Morris. On the top of the

column is a statue of General Washington in the full uniform of a Continental officer; an exact reproduction of his own uniform, which is now preserved in the Smithsonian Institution at Washington.

On the tablets at the four sides of the base are reliefs in bronze. That on the west side represents the Continental forces crossing the Delaware River. Leutze's celebrated picture has generally been accepted as describing the scene, but is far from the ascertained truth. The flag shown in his picture was not carried, and the ice is of a kind impossible for such boats as he painted to pass through. The boats actually used were the "Durham boats," which had been collected from the Upper Delaware by Washington's orders during his march through the Jerseys, some time before. They are of picturesque and serviceable shape.

On the south tablet is the "Opening of the Fight," with Hamilton about to fire the first shot from his battery down King Street. Hamilton was only nineteen years old at that time, and his company of artillerists, from New York, were all young fellows like himself; but the battery is said to have been a model of discipline. Their first discharge created great havoc among the Hessian artillery, which was soon afterwards captured in a charge made by Colonel George Weedon's Virginia regiment.

The relief on the east side, that towards the "apple orchard," shows the surrender of the Hessians.

On the north side of the base is a bronze tablet presented by the Society of the Cincinnati in New Jersey, commemorative of the victory, which was so important at that critical period.

The mention of the battle and of Washington's name recalls to the writer's mind that when a small boy (now, alas, many decades ago) he was intimately acquainted with an old gentleman named H——, who had served in the battle of Trenton, as well as in several others. He lived to a very great age, on his paternal acres. We boys used to say he was "more than a hundred years old;" he was probably about eighty-five at that time, but a brisk old man for his years; and he always wore a blue coat and brass buttons, and a cockade in his beaver hat, which, with top-boots and a cue, were already becoming rather uncommon. The old gentleman had a very nice place, a little out of the country town, and especially devoted himself to the cultivation of pear-trees, in which he took great pride, but never would sell any of the fruit, sending it round as presents to neighbors, among whom was Joseph Bonaparte, Count de Survilliers. In the fall, when old Major H——'s fine pears were ripe, we urchins regularly made a visit to the veteran, invariably finding him sitting in the sun, on his west porch, and looking at his pear-orchard, as he leaned his chin upon a stout yellow bamboo.

"Well, what do you want now, you young scamps?"

"Major," the spokesman would say, "we thought we would come and ask you for some of your fine pears."

"Oh! you did, eh? And what did I tell you last fall? Any boy who can't sing what I taught him shall have no pears! Come on, now!"

And then each stepped up before the old man (who kept the time with his bamboo as a baton), and sang out,—

"*To* Washington; that valiant m-a-a-a-n,
He led the troops of glo-*rye* on;
He *fout* his foes on eve-*rye* side:
And he bold-*lye* 'umbled Britain's pride.
But, now, alas! he is no mo-o-o-re!
He's gone to the rel-lums of Canäan's shore!"

There were several other verses, which we will not inflict upon our readers. We always got our pears, great baskets of them, and I can see that sunny-faced, wrinkled veteran, as he sat on his west porch, just as plainly as if it was not so many years ago.

The simplicity of those days has gone, never to return, and I don't know that we are happier.

In the new interest lately evinced in all matters relating to the First Napoleon, the following statement contained in Sir William Frazer's "Hic et Ubique" (London, 1893) may be of interest:

"Napoleon the First assumed a great variety of characters; he knew that the French loved the dramatic almost above everything; no scruples prevented his assuming the character which suited his purpose for the moment. When it was suggested to him that the stiff, black military stock, the fashion of the day, was unsuited to the classic robe which he designed for himself when taking the First Consulship, he replied that their was no harm in retaining something soldierly in his new capacity. He declared himself a Mahometan in Egypt, and had he reached India he would no doubt have published to the inhabitants that he was a sincere Brahmin, or at least a Buddhist. There was, however, one capacity in which he was near figuring, hitherto unknown.

"We cannot picture to ourselves the first emperor of the French hitching up his loose trousers and requesting in English his brother sailors to 'Belay,' nor 'Avast heaving!' we cannot fancy him requesting any one to 'Shiver his timbers,' nor indeed to use any of the naval vernacular; such at least as it is represented on the British stage.

"Yet this state of things was not far from occurring. When Napoleon was at school at Brienne the son of an English peer, who himself became Lord Wenlock, was his school-fellow. One day the little Corsican came to young Lawley and said, 'Look at this:' he showed

him a letter written in remarkably good English; it was addressed to the British Admiralty, and requested permission to enter our navy. The young Bonaparte said, 'The difficulty, I am afraid, will be my religion.' Lawley said, 'You young rascal, I don't believe you have any religion at all.' Napoleon replied, 'But my family have; my mother's race, the Ramolini, are very rigid: I should be disinherited if I showed any signs of becoming a heretic.' These facts I had from one who had very good means of knowing; he told me that Bonaparte's letter was sent, and that it still exists in the archives of the Admiralty. I have not searched for it, for the simple reason that I did not wish so good a story to become prematurely public. I hope that some one who has access to the historical documents in that department may take the trouble to find it."

It is a curious story, as Sir William Frazer says; but Sir William is, before all, a *raconteur*, and we should rather see the matter verified by some such person as Professor Loughlin.

At another part of his "Hic et Ubique" Sir William Frazer says,—

"A remarkable historical fact has not been accounted for by Physicians. Julius Cæsar, Wellington, Napoleon, and the Arch-Duke Charles of Austria, four of the greatest generals the World has ever known, were all subject to Epileptic fits."

Last October died Marshal MacMahon, Duc de Magenta, just as all France was in a spasm over the visit of the Russian fleet. Even that did not prevent full honor being done to the ex-president, whose greatest feat, after all, was not in the capture of the Malakoff, but in his saying, when timid councils looked towards evacuation of the dearly bought earth-work, "J'y suis: j'y reste."

Although so thoroughly French, MacMahon's Irish descent was not so remote. Most of the Irish who have made names and families for themselves among the Latin nations went abroad for political reasons, especially after the defeat of the adherents of James the Second at Limerick and Aughrim, two centuries ago. Their history is a curious one, as much so as that of the Scotch, who have exercised so much military and naval command in Russia and Germany in not remote days. We do not mean the "Dugald Dalgettys," but those who established families and became completely identified with their adopted countries. In 1798 many more Irish went abroad, and, France not offering the inducements of former times, many went to Spain, where religious sympathy insured them a good reception, while their good swords and military prowess did the rest.

And this "reminds me of a little story," as Mr. Lincoln used to say. During an African cruise in 1855–57 we used sometimes to go to Grand Canary to recruit. This charming island, which raises every-

thing, from bananas and pineapples to wheat and pears, according to the zone of cultivation, contains the estates and residences of some of the bluest blood of Spain. In our squadron was a lieutenant named B——, whose grandfather had come to "the States" from Ireland for political reasons.

When we made our first visit to Palmas, Grand Canary, B—— said he knew his grandfather's brother had settled there, and had attained a good position, but he knew not whether he had left a family or not. On our arrival due inquiries were made, and it was found that the Señoritas B——, some maiden ladies of wealth, were among the very cream of society in this old-world place. Through mutual friends the cousins met; but their intercourse was carried on by means of an interpreter, for B—— did not speak a word of Spanish, nor did the señoritas understand a word of English. Yet they were blood relations, bearing the same name, and not so far apart in descent. Such cases no doubt have occurred in Spanish South America, where the infusion of Irish blood is large.

We extract a few paragraphs from the English *United Service*, which disclose a rather bad state of things in the naval construction department:

"The summary dismissal on Thursday of a boiler-maker at Chatham Dock-Yard, upon his being discovered filling holes with red lead instead of rivets on the troop-ship 'Tyne,' is felt to have been an all too light punishment for such an outrageous act. If the law would not permit of any stronger action being taken against him, there is a strong opinion that it needs speedy amendment in this respect, for a more heinous offense it is scarcely possible to imagine. The perils of the sea are enough, without having the lives of hundreds left at the mercy of scamped work of this sort, done for the sake of making a little more money by piece-work. Penal servitude would, it is agreed with the *Daily Chronicle*, not be too great a penalty for a proven case. The difficulty is to prove one, or even to discover one, though it is to be feared that the trick is all too frequent, and the reason why some

'Ships go down at sea
When heaven is all tranquillity.'"

But why have piece-work in government dock-yards, we may be allowed to ask? It has always been supposed on this side of the water that work in navy-yards secured thoroughness in details, although confessedly slower and more expensive than contract work, on account of the careful inspection it received from government officers.

After such a piece of villainy as that, another fraud described in the same number of the journal quoted seems quite innocent:

"Though less serious in its probable result than the mixing of ball cartridge with blank, the fraudulent tampering with the service ammunition is regarded as sufficiently serious, which, according to a correspondent of the *Westminster Gazette*, was discovered last Saturday at Reading on the occasion of the annual reunion of the Postal Telegraph Battalions of the Royal Engineers. The feature of the day was, as usual, a rifle competition, in which each man fired ten rounds, several valuable prizes being offered. Soon after the firing commenced it was noticed that bullets aimed dead on the target at four hundred yards fell after a slow flight of from fifty to one hundred yards. So frequent was this occurrence that the ammunition was inspected in the presence and by the order of Captain O'Meara and other officers. It was found that the greatest part of the powder had been abstracted and paper wads substituted. It is significant that, although the ammunition was made in the year 1888, the wads consisted of daily papers of last month. The ammunition was served out from the New Cross Depot of the Royal Engineers. If such tampering were to become at all general, rifle contests under fair conditions would, it is clearly seen, be in the future impracticable, and, worse still, the proper shooting training of our troops interfered with." The journal hopes that "it will prove, as is thought to be most likely, the work of one or two miscreants, and not any extensive scheme of fraud."

It would seem impossible to suppose that any one could have made this troublesome abstraction of powder for the trifling gain connected with its sale. Had it not rather been suggested by malice? At any rate, it would be well for competing teams on our side of the water to know that such things happen, and to look after their ammunition closely. It is the same old admonition, in a slightly varied form: "Trust in God and keep your powder dry," with the addition, "See that it hasn't been tampered with."

That excellent service journal, the *Army and Navy Gazette*, in speaking of the grounding of the "Camperdown" in coming out of Malta, after repairs effected in consequence of her successful ramming of the "Victoria," says, quoting another paper, "Had the 'Camperdown,' when thus losing the benefit of her helm, been in the midst of a squadron out at sea and figuring in the gridiron manœuvre, or something of that kind, it is painful to reflect on what might have been the result to her consorts." Unfortunately, machinery is no respecter of times and places, and just as frequently goes wrong during tactical evolutions as at any other time. During the recent manœuvres seldom a day passed without one or more ships having to report

temporary defects of this nature, but we believe that very little damage can be traced directly to the breakdown of steering gear. The *Morning Advertiser* about hits the mark when stating that "an accident resulting from a fault in the steam steering gear is as nearly an unavoidable mischance as anything can be." But even here we only see a partial recognition of the real trouble, which is that nowadays an error, whether personal or mechanical, is liable to produce results immeasurably more disastrous to life and property than similar causes brought about in the days of wood and hemp. We have no hesitation in saying that nine times out of ten the cause of these mishaps may be found in ill-judged parsimony. There was a letter in the papers not long since from a manufacturer who declared, such was the treatment received at head-quarters that none of the highest firms, in his particular business at all events, ever tendered for government work. There may or may not be good grounds for this statement, but it is notorious that in many points of a vessel's equipment the ship is spoilt for a pennyworth of tar. It is unfair, then, to blame, as the *Morning Post* does, the commanding officers of the ships, or the naval constructors, for the latter class must do the best they can within limits of price which they do not fix, while the protests of the naval officers fill the pigeon-holes of the Admiralty to overflowing; they are forbidden to write to the newspapers, and they have no commander-in-chief to represent them, no check upon the roseate views of officialdom like the annual report of the admiral of the United States fleet. The English public does not yet appear to appreciate the entire significance of the fact that an official may waste our money, an agitator may ruin our trade, and a politician may wreck the empire without fear of punishment now or hereafter; but let an unfortunate naval officer run his ship aground, owing to the cheap and faulty mechanism with which a so-called economical administration has provided him, and the cry is raised, "Court-martial," "Thorough investigation," "Culpable carelessness," "Hang him up," and so on. This difference in the kind of treatment accorded to naval officers and other servants of the public is surely very unfair.

About the most serious problem, whether economical or military, which is now to be confronted in a "new navy," is that of fouling. A construction officer of high rank and position has made the necessity of attending to the matter very plain. The condition of ships' bottoms becomes a source of solicitude for their officers from the very moment they are put into the water; unless, indeed, they happen to be lying high up the Delaware. In former days ships attached to the Mediterranean squadron used, it is said, to go to one of the Greek islands, where the harbor was the crater of an extinct volcano, which still gave forth gases which were death to barnacles and algæ. If we cannot

have our ships' bottoms sheathed and coppered,—thus affording a longer space between dockings,—and as all the so-called "marine paints" seem to fail, why can't somebody invent a plant which will generate gases destructive to marine growths, which could be mounted on a catamaran, and directed by hose and tubes against the offending material? This apparatus could be used in port every morning, if necessary, just as the "black-listers" used to be called away to "scrub copper" in the comfortable days of the sailing frigates. There is no use in talking about the matter,—*something* has to be done. The thing we suggest is not wilder than the electric practice seemed to be fifty years ago.

But, joking aside, it seems that the *Army and Navy Gazette* is right when it says, "Upon the value of any of these compositions for keeping a ship clean for a twelvemonth we have our doubts; certainly none of those now in use have succeeded in so doing." "We shall be glad to hear of a well-authenticated case of a battle-ship that did not require to be recoated after a twelvemonth in ordinary sea service. As it is, if a saving is to be made, why not make it in the cost of the composition? The expense of coating a battle-ship is probably little short of two hundred pounds, and if she was docked every six months instead of every twelve, an ordinary coat of paint would do as well as the best composition yet invented; the balance would be saved in the coal bill."

Among recent contributions to the large collection of the Historical Society of Pennsylvania are two which are of general interest.

The first is a map presented by Fairman Rogers, most exquisitely executed, entitled "A Map of the Highlands in the State of New York. Done for His Excellency Gen^{l} Washington, by Robert Erskine, F.R.S., July, 1779."

The map begins at Dobb's Ferry, and takes in Upper New Jersey, and then on in New York as far as "Newboro" and Fishkill Landing. It particularly delineates the crests and valleys, and shows the position of the various iron furnaces and forges which were of so much importance in those days.

It is a curious geological fact that the Catskill Mountains, so celebrated for their serene atmosphere and fine views, are practically devoid of useful minerals while the lower heights of New York and New Jersey, to the south, were among the great resources of our Colonial and Revolutionary days for iron.

The map in question is quite well preserved, and came, through only one hand, from the papers of Mr. Caleb Wayne,—who had possession of many manuscripts of Chief Justice Marshall—and it is supposed, with reason, to have been used by the chief justice when writing his "Life of Washington."

The other contribution to which we alluded was made by Judge Russell Thayer, and consisted of two letters written in 1857, by Mr. George W. P. Custis to Mr. T. W. C. Moore. Mr. Custis was, naturally, an authority upon the comparative value of the various portraits of Washington. He died at Arlington House, in October, 1857, at the age of seventy-seven. We may be glad that the old gentleman escaped the effects of the Civil War, which were particularly disastrous in and around his residence, and that he has left us so clear a testimony of the comparative value of the likenesses of *Pater Patriæ*.

In one of the letters he says, "We are sadly in want of prime *engravers* in our country" (we may say, in parenthesis, that that want has been supplied). He goes on, "Painters excellent and abundant. My Peale and Sharpless should be well engraved for posterity. I assured Lord Napier, who made me an especial visit to inspect the Treasures, that the Sharpless (*original from life*) was the best likeness of the man extant. Turnbull for the figure, Stuart for the head, & Sharpless the expression & you have all you can have of the portraiture of Washington. We must have a *National* Portrait by & by, the American people, the Good, the Wise, & the Brave of all humanity demand it. The fame and memory of the Pater Patriæ grow with time, and now, when a few gray heads like my own are only left to tell what Washington looked like, now is the time for the *National Portrait*."

In the second letter read (which was really the first in point of date), after referring to several portraits of Washington, Mr. Parke Custis writes, "As for the Wertmuller Picture, it is, in my opinion, an imposition in toto, and so I told the Swedish Ambassador, who waited on me to get information respecting it. It is said to have been painted in 1795. Now, I was not a day absent from the family of the Chief during 1795, & am sure that no such artist as Wertmuller had sittings of the great man at that period.

"The finest and *purest* likeness of the Chief is the original picture in crayon, by Sharpless, done in 1796, and with the original, by Peale, in 1772, of the Provincial Colonel, forms the First and last of the originals of Washington most to be relied on in the World. Stuart is the great original of the *First President of the United States*, Peale of the *Colonial Officer, Sharpless of the Man.*"

In March, and again in December, of last year, we referred to the curious disappearance from the knowledge of men of the camels imported by the quartermaster's department of the army a few years before the Civil War. The only notice concerning them was received from a gentleman who saw a herd, some of them very large, in use in the Southwest, some years ago. The December Notes had hardly been

printed when a letter was received from Lieutenant-Colonel E. B. Beaumont, of the United States army, in which he says,—

"In April or May, 1866, Lieutenant W. W. Webb, afterwards captain in the Fourth Cavalry, informed me that he had seen them at Camp Verde, on the Guadeloupe River, some sixty miles from San Antonio, Texas. That a Greek was in charge of the herd of nearly one hundred camels, if I remember correctly. That the camels born in Texas grew much larger and stronger than those imported. I was informed that as a measure of economy (perhaps to save the Greek's wages, as the grazing cost nothing) the herd was ordered to be sold, and brought *thirty* dollars, or about that, per head. That some were bought for a circus, some went to Old Mexico, and later rumor said that there were wild ones in New Mexico or Arizona. It was a matter of regret to some officers that the camels were not kept and turned over to the cavalry for pack-animals. Lieutenant Webb stated that the mail from Verde to San Antonio was carried by a rider on a camel, and the trip of sixty miles down was made in one day, and the return in the same time. I am under the impression that I have heard some one, when I was on duty in the Department of Texas, and within five years, say that he had seen some of these camels working at or near a mine in Old Mexico, not long before he told me."

As for wild camels in New Mexico or Arizona, we must repeat that, if any such exist, in spite of the rage of the Apaches and other Indians for "meat" in any form, it is because the camel has changed his nature in a very few generations since he was brought to the New World. It is, or was, an undoubted fact that camels bred in the island of Fuerte Ventura, in the Canaries, were larger and stronger than the camels of the Arabs on the African shore, but they were all carefully bred, and always in subjection. In Central Asia the two-humped camels may run half wild during the grazing season, but they are not in any sense really wild, for they belong to some tribe or chief, and are annually counted and reclaimed, exactly as a herd of cattle in our own country is "rounded up." Camels must belong to *somebody*.

Since the foregoing lines were written we have received several communications in regard to the camels of the Southwest, which must be reserved for a future number.

E. SHIPPEN.

NAVAL AND MILITARY NOTES.

NOTES AND DATA ON NAVAL AND MILITARY MATÉRIEL AND ALLIED SUBJECTS.

It is the intention to collect and publish in this department of the "United Service" all information obtainable from current publications and other available sources concerning ships, guns, armor, explosives, small-arms, military and maritime affairs, and kindred subjects. As the data are derived largely from unofficial sources, strict accuracy cannot be expected; but all reports will be carefully examined and compared with others on the same subject, and it is hoped, by this means, to attain fairly correct results. Erratum notices will be published whenever errors are discovered in data previously given. As the development of the present plans for collecting information progresses, it is hoped to secure fuller and more authentic reports.

WAR-SHIPS AND TORPEDO-BOATS.

Great Britain.

The torpedo-gunboat *Antelope*, a sister ship to the *Jason* (see description in May NOTES, vol. ix., page 485) was launched July 12, and is now practically ready for trial. The other vessels of this class are the *Alarm*, *Circe*, *Hebe*, *Jaseur*, *Jason*, *Leda*, *Niger*, *Onyx*, *Renard*, and *Speedy*.

The old broadside armor-clad *Agincourt* is now undergoing extensive repairs at Chatham, estimated to cost about $200,000. Upon their completion she will be placed in commission.

The trial of the troop-ship *Warren Hastings* (described in July NOTES, page 79) gave the following results: I. H. P., 3500; revolutions, 185; speed, about 18 knots.

The *Superb* was given a full-power forced-draft trial in May, the details of which have just come to hand. The air-pressure was 1.7 inches, I. H. P. 8700, and speed 15 knots. She was refitted with triple-expansion engines, designed to develop 8500 I. H. P. On her natural-draft trial, developing 6000 horse-power, the vibration was excessive. To obviate this the propeller-blades were bent aft. The result was all that could be desired, as even at the maximum power developed on the recent trial the vibration was hardly perceptible.

The torpedo-gunboat *Leda*, of the *Jason* class (see description in May NOTES, vol. ix., page 485), had her 8-hour forced-draft trial on September 2. The results were as follows: Air-pressure, 2.2 inches; I. H. P., 3601; speed by patent log, 18.3 knots.

The *Renard*, of the same class as the above, had her 8-hour natural-draft trial on September 6. The results were 2583 I. H. P. and 17.6 knots speed. On the following day, under forced draft, with 2.5 inches of air-pressure, the I. H. P. developed was 3948, and the resulting speed by patent log 19.4 knots.

Among the noticeable features of the British naval manœuvres was the reduction of speed of the heavy armor-clads due to foul bottoms, though none had been out of dock six months. It would appear that the sheathing even of battle-ships for home service is a point worthy of consideration, for in war the time which must be wasted in reaching dock,

docking, and returning to station will be a serious loss, while reduced speed may cause the loss of a battle, the failure to keep a rendezvous, or the fall of an important strategical point, due either to direct loss of speed or reduction of coal-supply to such a point as to compel recoaling before proceeding to the desired point.

France.

A partial description of the cruiser *D'Entrecasteaux* was given in the July NOTES, vol. x., page 81. As this is very incomplete and not wholly exact, the following, derived in part from various sources, is furnished in order to give a proper idea of the vessel. Being designed for foreign service, she will be sheathed and coppered. The dimensions are: Length on the water-line, 393 feet 6 inches; beam, 58 feet 5 inches; extreme draught, 29 feet 6 inches; displacement, 8114 tons. She will be fitted with two vertical, triple-expansion engines, and five cylindrical boilers designed to develop 14,000 I. H. P. with forced draft, giving a speed of 19 knots. The coal capacity at load-draught is 650 tons, but bunker space is provided for 1000 tons. The protective deck extends throughout the length, and is 3.9 inches thick amidships. Above this, and between it and a three-quarter inch flat steel deck slightly above the water-line, the hull is divided into numerous water-tight compartments to be filled with coal and stores. Each of the heavier guns has its own separate ammunition-hoist, located as near it as is convenient or possible. These, and all similar auxiliary machinery, steering gear, internal lighting, loading and training engines, etc., will be electrical. The armament will consist of two 40-calibre, 9.4-inch B. L. R., mounted in closed armored turrets of steel, 9.8 inches thick, one forward and one aft; twelve 5.5-inch R. F. G., four on the spar-deck behind 2 8-inch steel shields, and the remaining eight in sponsons on the deck below behind shields of similar thickness; twelve 3-pounder and four 1-pounder small R. F. G. There will be two submerged and five above-water torpedo-tubes, two of the latter being in the bows. The small rapid-fire guns will be mounted on the superstructure and in the tops, of which there will be three—or rather a three-decked one—on each of the two military masts. Within the masts there will be the usual staircases and fighting positions, and there will also be a heavily-armored conning-tower. The estimated cost is about $3,100,000. The first reports stated that she would, like the *Dupuy de Lome*, have light side armor, but the latest descriptions make no mention of such protection.

The first-class armored battle-ship *Charles Martel* was launched at Brest on July 28. This vessel was begun as a barbette ship about 1883. Before much advance had been made beyond drawing the plans all work was stopped. The construction was resumed about 1890, but upon entirely different dimensions and plans. All reports agree in assigning a displacement of 11,882 tons, but upon the other measurements no two authorities agree. After an examination of nine different reports, tables, and descriptions, the editor of the NOTES considers the following figures to have the greatest probability of correctness: Length on the water-line, 115 metres (377.3 feet); beam, 21 metres (68.9 feet); mean draught, 8 metres (26.25 feet). The armor belt at the water-line extends from bow to stern, but it is very thin at the ends. Amidships it is 17.7 inches. Above the belt the side armor is 3.94 inches thick. The turrets for the heavy guns are 14.56 inches in thickness, and for the 5.5-inch guns 3.94 inches. The armor deck is 2.75 inches thick. The battery is as follows: Two 11.8-inch B. L. in closed turrets forward and aft, one in each; two 10.6-inch B. L. in closed turrets, one on each side amidships; eight 5.5-inch rapid-fire guns in small closed turrets, four on each side, one gun in each. The secondary battery is composed of four 9-pounder and twelve 3-pounder rapid-fire guns and ten revolving cannon and machine guns. The engines are twin-screw, vertical, triple-expansion, of 13,500 horse-power, designed to give a maximum speed of 18 knots with forced draft and 17 knots with natural draft. As in all the recent French armor-clads the boilers are tubulous, and are of the *Lagrafel-D'Al-*

lest type. The coal-supply is 800 tons. Six torpedo-tubes are fitted. A feature of the mounts of the heavy guns is the automatic ammunition-hoist, actuated by the recoil and return to battery of the gun. This insures the proper supply of ammunition at the proper time, thus avoiding one of the most serious sources of delay in loading.

The second-class protected cruiser *Suchet* was launched August 10. She was originally designed as a sister ship of the *Davout*, but was subsequently lengthened. Her dimensions as built are: Length on water-line, 318 feet 3 inches; beam, 39 feet 8 inches; and displaces 3429 tons at a mean draught of 17 feet 7 inches. The engines are twin-screw, horizontal, compound, designed to develop 9000 horse-power with forced draft. The boilers are of the *Lagrafel-D'Allest* tubulous type. The maximum anticipated speed is between 19 and 20 knots. The protective deck, which is complete, has a maximum thickness of 2.36 inches. The battery consists of six 6.3-inch R. F. G., four 3.9-inch R. F. G., four 3-pounder R. F. G., eight revolving cannon, and four machine guns of musket calibre. The complement of officers and men is 246. The *Suchet* was launched with her machinery on board, and is now about ready for trial.

Italy.

The third-class protected cruiser *Liguria*, one of four sister ships, and the last of her class to take the water, was launched at Sestri in July. Her dimensions are: Length, 262 feet 5 inches between perpendiculars; beam, 39 feet 4 inches; draught, 16 feet 7 inches; displacement, 2281 tons. The engines are twin-screw, triple-expansion, of 6500 I. H. P. with forced draft and 4000 I. H. P. with natural draft, for which powers the anticipated speeds are 19.5 and 17.5 knots respectively. The coal-supply is 430 tons. The battery consists of four 152-millimetre (6-inch), six 4.7-inch, and eight 6-pounder rapid-fire guns. The protective deck is complete, with a maximum thickness of 1.97 inches. The names of the three sister ships to the *Liguria* are the *Lombardia*, *Etruria*, and *Umbria*. The *Calabria* is of a similar type, but slightly larger. She has not yet been launched.

The *Etruria*, mentioned above, has completed her natural-draft trials. The average speed for 6 hours was 18 knots, and the horse-power 4300.

Turkey.

A torpedo-catcher for Turkey, length 186 feet 8 inches, was launched August 17 at the yard of the Germania Ship-Building Company, Kiel.

Brazil.

The full-rigged, single-screw vessel designed to serve as a school-ship for the Brazilian navy, completed her steam trials in July. The horse-power developed on trial was about 2800, speed 14 knots. The dimensions are: Length, 236 feet 2 inches; beam, 44 feet 7 inches; mean draught, 18 feet; displacement, 2750 tons. The hull is of steel, sheathed with wood and coppered. A light protective deck extends the whole length of the ship. The battery consists of four 5.5-inch R. F. G. in light barbettes: two on the forecastle and two on the poop; eight 5.5-inch (or 4.7-inch) R. F. G. in broadside on main deck; ten light rapid-fire and machine guns. Four torpedo-tubes are fitted.

United States.

The protected cruiser *Minneapolis* was launched at Cramp's ship-yard, August 12.

The principal data of the trial of the *New York* were given in the August NOTES, vol. x., page 187, but the official report of the trial was not then at hand, and the information furnished was necessarily incomplete. The I. H. P. developed in the main engines was, as there stated, 16,947.29. The I. H. P. developed in all auxiliaries was 454.13, giving a collective I. H. P. for all machinery in operation of 17,401.42. The following description of the ship may prove of interest.

The length on the load water-line is 380 feet, over all (including rudder) 384 feet; the extreme beam is 64 feet 3

inches; mean draught, sea-going trim (load-draught), 24 feet, at which the displacement is 8529 tons. The displacement at the beginning of the trial was about 8550 tons, and at the end about 8410 tons. The mean displacement during the trial was therefore 8480 tons, and the mean draught was 1½ inches less than the load-draught, sea-going trim. The hull is divided into 184 water-tight compartments, and there is a double bottom, 3 feet 6 inches in depth, amidships, divided into 11 water-tight compartments, extending from frame 27 to frame 81, and about 29 feet outboard on each side from the keel at the midship section. A coffer-dam, 3 feet 6 inches wide, extends the entire length of the ship on each side, from the top of the protective deck to the under side of the berth-deck abreast the machinery spaces, but only about half-way up to the berth-deck forward and abaft. The coffer-dams are filled with cellulose. There are fore-and-aft passages on each side, one 2 feet wide next the coffer-dams, and one 4 feet wide below the protective deck underneath the coffer-dams, and both extending the length of the machinery spaces. Both passages are divided up by water-tight bulkheads, and together with the coffer-dams form practically an extension of the double bottom, as the bottoms of the lower passages are the tops of the outboard extremities of the double bottom. The double bottoms are further extended by water-tight compartments serving the same purpose forward and aft beneath the ram plate and steering-engine flats, and which also serve as trimming tanks. A powerful pumping system with a 14-inch main and 7½-inch secondary pipe connects with all compartments. The total capacity of the coal-bunkers is about 1280 tons. They may be filled through adjustable overhead chutes or coaling ports. There are no outside ash-chutes, the ashes passing through inside pipes, which discharge overboard near the level of the berth-deck. The slope of the protective deck is made up of three courses of plating. The lower two, each 1½ inches thick of mild steel, extend from stem to stern. The upper course, of nickel-steel, is 3 inches thick, and extends the length of the machinery space, in this locality making a total thickness of 6 inches. For the same length a vertical belt of 4-inch nickel-steel, 8 feet 10 inches wide, extends from the protective deck to the under side of the berth-deck. Around the engine hatch are glacis plates rising three feet above the protective deck flat and inclined at an angle of about 30°. The armor covering the guns is all of nickel-steel. On the 8-inch sponsons it is 2-inch; 8-inch gun barbettes, 10-inch; 8-inch turrets, 5½-inch; 4-inch sponsons, 4-inch; 6-pounder sponsons, 2-inch. The conning-tower and shield are 7½-inch nickel-steel and the communication tube 5-inch. There are two military masts each carrying three fighting tops. To facilitate communication throughout the ship and to avoid multiplication of voice-tubes, a central station is provided below, by means of which any one tube may be connected with any other. A few very important tubes in the conning-tower, however, lead directly without going to the central station. The battery consists of six 8-inch guns, twelve 4-inch rapid-fire guns, eight 6-pounder rapid-fire guns, four 1-pounder rapid-fire guns, and four gatlings. Two 8-inch are in a closed barbette-turret forward on the midship line on the upper deck, two aft similarly placed, and one in a sponson on each side amidships. The 4-inch and 6-pounders are in sponsons on each side of the gun-deck, and the gatlings are mounted in the lower tops, two in each. There are five torpedo-tubes, one in the stem, one on each bow, and one on each quarter. There are four sets of three-cylinder triple-expansion engines (cylinders 32, 47, 72 inches; stroke 42 inches), two on each shaft, so arranged that the forward set can be disconnected and the after set driven at full, or nearly full, power in order to secure greater economy at moderate speeds. The coupling of the shafts is fitted as follows: Around the after end of the line shaft and the forward end of the forward section of the after crank-shaft flanges rise to a diameter of 2 feet 8 inches, and they are respectively 5½ and 3½ inches broad (measuring parallel to line of shaft). These are cogged exactly alike to a depth

of 4 inches. There are eight cogs on each flange, 6½ inches wide at the points and extending across the flanges. A steel sleeve, 3 feet 2 inches outside diameter, 2 feet 8 inches inside diameter, and 10 inches long, is grooved inside to mesh on the cogs of the shaft-flanges when in position. The sleeve is moved by two screws on opposite sides, working in eyes on a recessed loose collar. The go-ahead faces of the cogs are fitted with steel liners 1½ inches thick. The planes of the faces of all the cogs, if extended, would be tangent to a 3-inch axial cylinder. Each set of engines is in a separate water-tight compartment with communicating water-tight doors. There are six double-ended, cylindrical, horizontal, fire-tubular main boilers 18 feet in length and 15 feet 9 inches in diameter with four Fox corrugated furnaces (outside diameter 43 inches, inside diameter 39 inches) in each end, and two single-ended, horizontal, fire-tubular auxiliary boilers with two furnaces in each. The main boilers are located two each in three water-tight compartments, separated by thwartship bulkhead. There is one smoke-pipe for each pair of boilers. The auxiliary boilers are located on the protective deck over the two after pairs of main boilers and between the uptakes of the latter. The auxiliarly smoke-pipes pass up through the centres of the after main smoke-pipes. The thickness of the main boiler shells is $1\frac{1}{16}$ inches, of the tube-sheets $\frac{5}{8}$ of an inch, and of the furnaces $\frac{13}{32}$ of an inch. The total heating surface of one main boiler is 5167.52 square feet, grate surface 164.66 square feet. The diameters of smoke-pipe (oval) are 8 feet 6 inches and 6 feet 6 inches, and its height above lowest grates 80 feet. The closed fire-room system of forced draft is used, for which 14 blowers are provided, four in each main, and one in each auxiliary fire-room.

On the starboard side of the berth-deck forward is a dense-air ice-machine, which is capable of furnishing one ton of ice per day. The refrigerating and cold-storage room is on the gun-deck above the ice-machine.

There are two dynamos, of 80 volts and 400 ampères capacity, and one of 80 volts and 200 ampères, all compound wound. They are directly connected to the shafts of vertical, two-cylinder, simple engines, 13 by 6 inches and 8½ by 6 inches, running at a speed of 400 revolutions. There 491 16 candle-power and 230 10 candle-power incandescent lamps, and 50 additional outlets. There are 4 50,000 candle-power projectors and 5 search-light mounts. The four ammunition-hoists of the forward and after magazines are operated by electric-motors,—those for the 4-inch guns about 4 horse-power each, and those for the 8-inch guns about 6 horse-power each. The ship is furnished with a number of telephones and electric drills, and an electric gig capable of making about 8 knots for 4 hours.

The official report of the trial trip of the *Castine* gives the average speed for about 4 hours over a 60-knot course as 16.032 knots, or 3.032 knots above the contract requirements. The trial was in every way highly successful.

The *Machias*, sister ship to the *Castine*, did not do so well. The dimensions of these vessels are: Length over all, 198 feet 4 inches; length on load water-line, 190 feet; beam at water-line, 32 feet; mean draught, 12 feet 0.75 inch; displacement, 1067.5 tons. The engines are twin-screw, three-cylinder, triple-expansion, with cylinders 15.75, 22.5, and 35 inches in diameter; stroke, 24 inches. The condensing surface is 2246 square feet; grate surface, 120 square feet; heating surface, 4590 square feet. The diameter of the propellers is 7 feet 8 inches; pitch, 8.86 feet. The boilers are of the marine locomotive type, with flat-sided fire-boxes. The pressure at the boiler was 163.2 pounds; at engines, 159.5 pounds; vacuum, 25.7; revolutions per minute, 218.55 starboard, and 223.53 port. The horse-power developed by the main engines was 1967.25; by the auxiliaries, 78.92; total I. H. P. of all machinery in operation, 2046.17. Mean resulting speed over a 60-knot course, 15.46 knots.

HEAVY GUNS AND MOUNTS.

It is reported from Malta that the "A" tubes of three of the four 12-inch 45-ton guns of the *Colossus* (British armor-clad, 9420 tons) are seriously cracked near the muzzles.

The United States Army Ordnance and Fortification Board has made the following allotments: $47,500 for a Gordon disappearing 10-inch gun carriage; $5000 for a deck plate for experiments with deck-piercing projectiles; $2000 for 500 rounds of ammunition for testing the Maxim-Nordenfeldt gun; $2000 for continuing experiments with the Brown segmental gun, and several others of minor importance. The new Gordon carriage, for which an allotment was made, is on the same principle as the 8-inch carriage already built and tested, but a number of changes were made in the details with the view to correcting the defects developed in the trial of the first one. One of the principal changes is the substitution of a geared movement for the lever movement of the piston-rod.

A correspondent of the Berlin *Tagliche Rundschau* furnishes from Cuxhaven some particulars of the guns which it is proposed to mount in the fort to be constructed on the island of Neuwerk, at the mouth of the Elbe. These guns, according to this authority, are to be the heaviest ever built by Krupp. They are to have a calibre of 42 centimetres (16.536 inches) and a length of 14 metres (45.93 feet), and are to weigh approximately 120 tons. The weight of projectile is to be 2204½ pounds, and the powder charge 903.9 pounds. With this charge the initial velocity would be 1982 f. s., and the range, with 10½° elevation, 9678 yards. Among the guns to be mounted in the other forts are to be some 24-centimetre (9.45-inch) coast guns of the latest pattern, 31½ feet long and weighing close on 28 tons. With a projectile of 474 pounds and a charge of 253½ pounds, the initial velocity attained by these guns is 2099.78 f. s., and the range, when fired at Meppen at an elevation of 44°, 21,873 yards.

The following is the report of Lieutenant Whistler, United States army, to the Trustees of the Brown Segmental Wire Gun, giving a synopsis of the results of experiments which took place during the spring and summer of 1893:

"NEW YORK, August 7, 1893.

"TRUSTEES OF THE BROWN SEGMENTAL WIRE GUN:

"GENTLEMEN,—I have taken this opportunity, while we are waiting for powder, to submit my report after the seventy-fifth round of the official test, although we have fired but seventy-four shots. The total number of shots that have been fired from the 5-inch gun is 85, being 11 at Birdsboro' and 74 in the official test. Five shots gave a pressure of over 70,000 pounds per square inch, one of which gave a pressure of over 75,000 pounds per square inch. Twenty-two gave a pressure of 40,000 pounds per square inch. Twenty-three gave a pressure of 50,000 pounds per square inch; fifty-six of the entire number being fired at pressures exceeding 15 tons per square inch, which is the usual service pressure used in the navy. In consequence of the fact that up to the present time the manufacturers have been unable to furnish us with a powder suitable for the gun, the maximum muzzle velocity as yet obtained has only been 2430 feet per second. The gun has stood the test in an exceedingly satisfactory manner, and the Brown breech action has proved itself more than satisfactory. It is probable that the De Bange gas-check will be used instead of the copper cup devised by Mr. Brown. The cup has worked well, but there is danger that the cup may be forgotten in the excitement of action; in fact, this accident occurred once during the test, when the gun was fired without a gas-check. Mr. Brown's foresight in inserting escape ports for the gas, in case of accident, which is a part of his system, prevented any injury to the breech action by the rush of gas by the block. Except the slight delay incident to cleaning off the block, the accident did not in any way affect the firing. This was an extremely severe test of the action, and demonstrated the value of the system. After

the sixty-sixth shot, fifty-fifth of the official test, which gave a pressure of over 75,000 pounds per square inch, the gun was carefully star-gauged, and the impressions taken at several points in the bore. The result of the star-gauging showed that not the slightest enlargement had taken place in the bore of the gun. In the chamber a few variations of about one-thousandth of an inch were noticed. These are entirely immaterial, and occur in the chamber of all guns, probably due to settling together of the parts. We have thus demonstrated the soundness of the theory of communition of parts, in order to utilize to the utmost the special elasticity of the metal. The enormous elastic strength of this system of gun construction has, in my opinion, been conclusively demonstrated. The impressions taken of the bore of the gun showed that under the enormous strain to which this gun has been submitted the front end of the liner has turned slightly in the bore. The liner was keyed only in the rear end, it having been assumed that the friction and the torsional strength of the metal would be sufficient to prevent turning. It is, however, manifest that in a gun intended to use such excessive pressures the liner must be keyed from end to end. This is not a difficult mechanical problem, and will be done hereafter. No change will, however, be made in the present liner until a sufficient number of additional shots have been fired to determine if any further motion will take place. It goes without saying that this does not in any way affect the system, being a mere detail of construction.

"The only other point of any importance disclosed by the examination was that the lines between the segments were plainly marked on the impressions. The lines showed with equal distinctness at or near the muzzle as they did near the shot-chamber. As no impressions were taken of the bore before the gun was fired, it is impossible to say whether the lines would have shown as clearly then as now, or whether these lines are due to the action of powder gas. The gun will be again star-gauged, and impressions taken after the hundredth round. Before this time an additional 45 shots will have been fired since the examination, with pressures of 50,000 pounds per square inch. Such a severe test will clearly show whether these marks are or are not due to scoring.

"However, even if due to scoring, it does not in any way affect the value of this system of gun construction, but merely demonstrates that in order to increase the life of a gun a Chase liner should be used. It has already been demonstrated that we can rifle upon a segmental bore, and that a liner is not essential to the system. The use of a liner will, of course, materially increase the life, and hence the value of a gun. The terms of the test prescribed by the government authorizes the relining of the gun whenever necessary, such action not affecting the value of the system, except that the life of the liner would be taken into consideration. In conclusion, I would state that the first 74 rounds of the official test have demonstrated beyond question the soundness of all the claims made for the gun. In my opinion, the Brown segmental system of wire gun construction is, theoretically and practically, the strongest system of gun construction in existence to-day.

"Yours respectfully,

"G. N. WHISTLER,

"*First Lieutenant Fifth Artillery, Engineer for Trustees.*"

RAPID-FIRE, MACHINE, AND FIELD GUNS.

The Hotchkiss Ordnance Company has devised a 2-pounder rapid-fire gun for National Guard service. Its advantage are thus summarized: 1. In all ordinary emergencies it obviates the use of field artillery, by saving the time necessary to mobilize and transport it, and the expense of maintaining it. 2. It combines the effect of machine guns and field guns, and is superior to either for use against mobs. With canister it can sweep a street clean, and by the rapid fire of small shells can quickly demolish any barricade or building. 3. Four men without technical instruction or experience can handle it. 4. Infantry regiments with one of these guns as part of

their equipment would double their moral and physical force in operations in support of civic authority. 5. Artillery companies equipped with four to six of these guns can be maintained at a nominal expense, and used either as full batteries or in detachments.

GUNPOWDER AND EXPLOSIVES.

The London *Daily Telegraph* thinks that the days of gunpowder as a charge for naval guns are numbered, as some experiments just concluded at the government proof-butts, Woolwich, appear to prove a decided superiority for cordite. A 6-inch quick-firing gun was loaded with 29 pounds 12 ounces of the ordinary black gunpowder, and yielded a velocity of 1890 feet per second, with a pressure strain on the gun of 15 tons per square inch. The same gun was charged with 14 pounds 3 ounces of cordite, and gave a velocity of 2274 feet per second and a pressure of 15.2 tons. More important still, after 250 rounds had been fired there were no signs of erosion.

The Bankok *Press* asserts that the French fired melenite shells, and that one shell tore its way through the iron bulwarks on the side of a Siamese ship, ripped up some planking, and struck a windlass before it exploded, killing three men and wounding others. Elsewhere Hotchkiss "bullets" are mentioned as slightly wounding some of the Siamese sailors. The passage was forced on a flood-tide, just before nightfall, and although in one part of the account it is said that a submarine mine was exploded 50 yards ahead of the leading ship, in another regret is expressed that torpedoes had not been placed in the river. The Siamese vessels would have proved better obstructions under water than above it, and, as the *Army and Navy Gazette* says, it has once more been demonstrated that forts, unless in exceptionally favorable circumstances, are unable to prevent ably-handled ships from entering a channel.—*Army and Navy Journal.*

Experiments are proceeding in India with a view to testing the destructive action of cordite gases in the Lee-Metford rifle. The introduction of a thick wad into the cartridge has reduced the damage done, which is usually at the point in the barrel where the bullet is "set up" immediately after the explosion of the charge. The wad acts as a sort of cushion for the gas, allowing greater space for expansion, and thus lessening the pressure on the barrel. Over 2000 rounds have been fired from a rifle without any ill effects being shown, but it is desired to reach double that number, as, on an average, each soldier fires 300 rounds per year. The "life" of a rifle should be ten years at least, and with careful handling it should last fourteen years if not used on a campaign. The Snider, which was originally very strongly constructed, was made to last over twenty years, until the rifling was almost worn out, and now as a breech-loading smooth-bore in the hands of the military police it is still a serviceable weapon. The curious thing about cordite is that in field guns it is less destructive than black powder, except in the matter of the vent, where the gas causes rapid erosion. This is being got over by special appliances, and it is not likely that any new smokeless explosive will be adopted for the British army. India, for the present, will rely upon cordite exported from England.—*Army and Navy Gazette.*

MISCELLANEOUS MILITARY NOTES.

The *Revue du Cercle Militaire* gives a description of a new portable tent which has been definitely adopted by the Ministry of War at Vienna, to be served out first to the infantry and subsequently to the cavalry and artillery. This new tent will be carried by the men themselves. It is fitted to accommodate two men; it weighs 16½ pounds, and is made in two parts, each half to be carried by one of the two men who are to occupy the tent. One part consists of the tent itself; the other part of its accessories, such as door-way curtains, pegs, ropes, etc. Two regiments belonging to the

Vienna garrison are to give it a first practical trial at the impending manœuvres in Hungary.

Captain George H. Palmer, Sixteenth Infantry, has been giving considerable attention lately to improvements in field equipment for troops. A complete outfit submitted by this officer is now on exhibition at the ordnance bureau. It consists of a half-shelter tent, having triangular pieces attached to its ends, and, when set up, inclosing three sides; and when joined to a like half-tent forming a completely inclosed tent. It is rolled around the blanket, and carried across the body, on the shoulder. A canvas valise, about 3 feet long, 6 inches wide, and 2 inches deep, narrowed to 4 inches at its middle, where it rests on the shoulder. It is closed by lacing along its side, and is carried on the shoulder, across the body, in combination, by means of certain straps, with the half-tent roll. In it may be carried from 40 to 120 rounds of ammunition and clothing sufficient for field service. The equipment is of minimum lightness, simply constructed, of very few parts, and is put on and off instantly, without fastening or unfastening any of the straps. It has no shoulder or other bearing straps, to chafe and cramp the wearer. The weights carried are so distributed as to bear directly on top of the shoulders. The equilibrium of the body is maintained, and there is a minimum of discomfort or annoyance in carrying the equipment. The particularly new feature of Captain Palmer's invention is the canvas valise and the method of distributing the weight. The ordnance department will probably refer the device of Captain Palmer's to a board for report. The bureau has recently ordered 500 Dodge blanket-rolls and 500 Merriam's pouches, which will shortly be issued to troops for equipment and test.—*Army and Navy Journal.*

The announcement that Krupp at Essen has succeeded in perfecting an alloy of nickel and iron, giving equal tenacity for thirty per cent. less weight than steel, will probably lead to the rapid introduction of quick-firers for field artillery, and the power that is first to recognize the fact will gain a greater relative advantage over its competitors than did the Prussians when they introduced the breech-loader for infantry. Hitherto the question of mobility has been the rock on which all quick-firers for field service have split. It has been found impossible to unite the requisite weight of shell and velocity together with the means of checking the recoil, the essential feature of the quick-firer, within the limits of weight conditioned by the power of the horses. The dead weight of any hydro-pneumatic jacket to check the recoil of the gun being so great that no margin was left for a weapon of sufficient power to fight a single-loader of equal weight behind the teams, shot for shot; experience has shown that a single 12-pounder shrapnel was equal in effect to many lighter ones, and hence a greater total weight of ammunition had to be dragged about by the quick-firer battery. Roughly speaking, the material and moral effect of a shell against living targets increases almost as the cube of its weight. If, therefore, a quick-firer of equal power to the existing single-loaders can be mounted on a carriage which, together with its gun, does not exceed the limit of load permissible behind the horses, an immense gain will result without necessitating an increase in the total weight of ammunition carried.—*Army and Navy Gazette.*

MISCELLANEOUS NOTES.

It is proposed to equip the Brooklyn, New York, Navy-Yard with a plant for coaling ships. It will require a special appropriation, and Secretary Herbert's annual estimates will contain an item for machinery for loading ships with coal at the Brooklyn Yard. Later an effort will be made to provide plants at other yards.

The north jetty at Galveston harbor, Texas, is now reported to be 4500 feet long, and the sea end in 10½ feet of water. Major Miller, C.E., in his annual report announces a depth of 14½ feet at mean low tide on the bar, a gain of 1

foot in the last twelve months. This means full 16 feet at high tide.

The English government has decided to add to its already large number of coaling stations. This time the location is to be on the island of Mahe, one of the Seychelles group in the Indian Ocean. The usual fort and heavy guns will be at once erected, and a light-house will be installed together with the establishment of a coaling and victualling station. Telegraphic communication will be established with England by way of the submarine cable from Zanzibar and the Mauritius.

The following letter to the *Army and Navy Journal* explains itself:

"To the Editor of the Army and Navy Journal:

"Please tell our professional brethren on the other side of the water that *we* discovered crinoline to protect ships from floating and spar torpedoes nearly thirty years ago. A chief engineer in our navy, by permission of Admiral Dahlgren, designed and attached to the monitor *Passaic*, in Charleston harbor, brackets and wires. It was tested by an empty spar-torpedo propelled by a fourteen-oared cutter, and pronounced a success. The facts are on record at the Navy Department.

"Henry Mason, U.S.N.

"Plymouth, Conn., August 8, 1893."

England.

The English public has now become thoroughly alarmed over the necessity of further increase of the British navy. Several mass-meetings have been held in London, at which prominent politicians and army and navy men have made vigorous speeches, in which they pointed out the urgent need for a strengthening of the English naval defenses.

Lord George Hamilton, of the Opposition in the House of Commons, gave notice of a resolution he would present, in which he called on the government for a statement of their intentions in regard to the navy, in order that immediate action might be taken in the matter.

Sir John Colomb made the point at this meeting that since Trafalgar there had been peace on the seas, but more tremendous and frequent wars on land than during almost any former period of equal length. That condition of things he attributed to the fact that while on land there have been various powers striving for mastery, on the sea throughout nearly the whole of that period the English power had been supreme. He claimed that what was necessary for England was that its navy should not be merely strong enough to defeat other navies, but that it shall be so supreme that the peace of the seas shall be preserved, because no one dare venture to contest England's mastery over the seas.

The *Times*, in an editorial, shows that England is only paying for the security of its commerce about sixteen per cent. in its navy, while France is paying one hundred per cent., and Russia one hundred and fifty per cent. "To France it would be a matter relatively of little moment whether she were seriously defeated at sea or not. To England the loss by even a temporary defeat, the mere money cost of the increased insurance on ships, the loss of commerce, the enhanced price of raw materials for manufacturers, and the consequent want of employment for England's population could not be estimated in figures. At all events, any cost that we may have to incur in order to make our fleets efficient cannot be counted beside the loss we should suffer should we meet with even a single disaster. That we should, therefore, determine to maintain our supremacy is no threat to foreign powers. For eighty years or more, holding that supremacy, we have secured the peace of the seas, and, as one of the speakers at the meeting well put it, 'If war between us and France is postponed till we attack her, there will be peace between us forever.' France has, however, developed her naval policy in directions which clearly show what she means to do, if ever she gets the opportunity to let us understand that the sea is no longer ours. Along the southern coast of the Channel

she has constructed a series of torpedo-boat stations, so arranged that, whilst they are sufficiently far inland to be protected by land defenses from attack from the sea, the torpedo-boats, issuing through a narrow channel, can reach the undefended harbors of England by night in a few hours. Leaving these to deal with us in our immediate home waters, France has, from the Channel and from all her out-stations, been concentrating in the Mediterranean a fleet of war-ships numerically very superior to ours. For war in the Mediterranean, she has great advantages in the possession of the now magnificent harbor of Toulon, or of Biserta, on the African coast, so that on either hand she threatens our long line through the Mediterranean. She is able to afford this concentration because, relatively to ours, she has virtually no distant commerce to defend. The ease with which she has carried out this scheme is an illustration of the fact that it is not enough that our navy should be larger than the French, or even larger than the French and Russian together. We require to have a fleet big enough to protect our commerce, and yet have a sufficient surplus to meet any exceptional concentration such as this in the Mediterranean. It is necessary to realize this if we are to appreciate the importance of the fact that at this moment the development of the French and Russian fleets is far more rapid than our own. As Lord George Hamilton has shown in his article on the subject in the current number of the *National Review*, there will be on the first of January next, including battle-ships, coast-defense vessels, and first-class cruisers, only four building in Britain, of which two are simply projected, while France on that date will have thirteen ships actually on the stocks, and Russia nine, while Russia has yet another in the same condition of being 'projected' as two of our four. If things were left in this position, and as yet the government have shown no definite sign of any intention to remedy them, it is clear that our naval supremacy must in a short time become a thing of the past.

"The programme laid down by the late government was a powerful step at the time in the direction of improving the relative strength of our navy. But in order that it should be of permanent value, it was obviously necessary that it should be supplemented by a second programme, similarly worked out, to come into operation as soon as the other was completed. In other words, if there was to be no check to the development of our fleet, it was indispensable that the present government should have begun a new programme when the naval estimates of the current year were introduced. This they did not do. As a consequence, it has happened that, relatively to other powers, we have not, even up to the present date, made the progress that we ought to have done. The naval programme was designed for the purpose of restoring to us that position of safety which we had lost by the neglect of former years. The last year, during which it has been allowed to lapse, has already enabled Russia and France very nearly to restore the balance of advantage to their side of the account,—that is to say, that while we have built fourteen ships, of 179,300 tons, since the Naval Defense Act was passed, they have built thirteen ships, of 120,300 tons. Our gain, therefore, to compensate the neglect of the past, has been comparatively small, and the purpose of the act has thus to a great extent been defeated. And if the state of affairs we have described as necessarily existing, according to our present estimates, on January 1, 1894, be not remedied, not we, but Russia and France, will be rapidly gaining naval superiority. Our slips and dock-yards, public and private, will be more empty of all new construction for the navy than they have been for years, and that at a time when it is certain that building, both in private and public dock-yards, could be carried on more economically than it has been possible for a considerable period. Not without reason, therefore, and by no means as a party move, but because it is indispensably necessary for the safety of the country, do Lord George Hamilton and Mr. Balfour ask that the government shall announce their programme before the Christmas recess. Steps must be taken at once to lay down new ships, if

every hour of delay is not to bring peril in its train. The nation asks for nothing extravagant, and it can well afford to pay, in a reasonable and prudent manner, for what it demands. We must have, as Sir Albert Rollit said yesterday, not only security, but a sense of security; and the government that expects to make this provision incurs the gravest responsibility."

The failure of the new first-class cruiser *Theseus* at her official natural-draft trial in the North Sea was due to defects in her feed-pipes. The necessary work to put them in an efficient condition will be speedily taken in hand at Chatham Dock-Yard, and the ship prepared for another trial. The gun trials of the *Theseus* have been deferred until the completion of her machinery trials.

A serious accident occurred recently on board her Majesty's ship *Blanche*, at Simonstown, while saluting the admiral's flag. Several shots had been fired, and as the charge was being placed in the breech of one of the guns for the next shot it ignited and an explosion immediately ensued. One of the crew serving the weapon had his left arm shattered, and his face and eyes were dreadfully injured. Another man was wounded in the head, and it is feared that he will lose his sight; and several others sustained injuries of a less severe character. The crew were about to be paid off to return to England.

The first-class battle-ship *Revenge*, which was built and engined at Jarrow by Palmer & Company, made a contractor's 8-hours' trial in the Channel under natural draft. The average boiler-pressure was 149.8 pounds, the revolutions 96.3 and 96.8, and the mean vacuum as high as 28½ inches and 28.3 inches. Under these conditions and with a mean air-pressure of .19 inch the starboard engine developed 4614 and the port engine 4563 horses, representing a collective horse-power of 9177, or 177 beyond the contract. The average speed of ship as registered by log was 17.375 knots, the estimated speed is 16 knots. It remains, however, to be said that the trim of the vessel was 24 feet 2½ inches forward, and 25 feet 9 inches aft, giving a mean immersion of 24 feet 11¾ inches, whereas her designed mean load-draught is 27 feet 6 inches. The coal consumption per unit of power per hour amounted to 1.95 pounds of Harris's deep-sea navigation coal.

The official trials of the *Royal Oak*, the last of the eight battle-ships built under the Naval Defense Act of 1889, were completed the last of November.

The mean results of the 8-hour natural-draft trial were as follows:

Air-pressure .27 inches, a total of 9221 indicated horse-power, or 221 in excess of the contract, and a speed by log of 16.5 knots per hour.

The mean results of the 4 hours forced-draft trial were: Air-pressure .98 inch, 11,571 indicated horse-power, or 571 in excess of the contract, and a speed by log of 18.27 knots per hour.

The *Royal Oak* is 380 feet long, 75 feet beam, and at a mean draught of 27½ feet displaces 14,150 tons.

Her engines consist of two sets of triple-expansion twin-engines, each having three inverted cylinders.

United States.

The following is taken from the New York *Times:*

"SANDY HOOK, N. J., December 14.—A successful test, both as to the workings of the Buffington-Crozier disappearing gun-carriage and of rapid firing from one of the new 8-inch service rifles of the United States, was given at the Sandy Hook Proving-Grounds this afternoon.

"The gun is one of the latest improved breech-loaders. It was mounted on a Buffington-Crozier disappearing carriage, a description of which was published some time ago in the New York *Times*. The firing began at 1.57 P.M., 10 shots being fired in 12 minutes 3 seconds.

"The time occupied for each shot, from the time the loading began, was 1 minute 12½ seconds, divided into 5 seconds for raising the gun from the loading to a firing position, 1 second to

fire, 1 second for the recoil back to loading position, and 1 minute 5¼ seconds for loading.

"The firing range of the gun was eight miles to the southwest. One hundred and twenty-five pounds of Dupont's brown prismatic powder was used as a charge, and a 400-pound conical projectile.

"The carriage worked admirably. The huge piece of ordnance rose automatically on huge levers of steel ten feet into the air, and then, after delivering its fire, sank gently back to its loading position.

"As compared with other rapid firing, it surpasses the best results secured by the naval test at the Annapolis Proving-Ground with guns fired from the ordinary stationary carriages. The best time made there was 8 shots in 10 minutes and 20 seconds with the same calibre gun.

"The other disappearing gun-carriages are left far in the rear by to-day's experiments. The carriage of the Pneumatic Gun-Carriage and Power Company, on which was mounted a 10-inch gun, only registered 10 shots in 64 minutes. Captain Gordon's disappearing gun-carriage was also tested with a 10-inch gun, but only registered 10 shots in 58 minutes.

"The tests to-day are looked upon as so successful and favorable that it is almost certain that the War Department will adopt the Buffington-Crozier carriage. A carriage for a 10-inch gun is now being built by the Southwark Foundry and Machine Company of Philadelphia, which, when finished, will give a direct comparison with the work of other carriages carrying 10-inch guns."

The trial of the cruiser *Marblehead* was somewhat of a disappointment to her builders, who had expected she would exceed the speed made by her sister ship, the *Detroit*. The speed, as first given out, before being corrected by tidal observations was an average of 18.94 knots for a 4-hour full power run. The corrections for tidal currents brought the speed down to 18.44, the official speed reported by the trial board. The contract speed of the *Marblehead* was 17 knots, so she made a bonus for the builders of $125,000. It is claimed that the *Marblehead's* propellers are not exactly suited to her, and that she would make more with screws of greater pitch. The *Detroit* made an average speed of 18.71 knots under similar conditions.

The *Olympia* on her trial trip during December made an average speed of 21.86 knots, subject to corrections for tidal corrections. The highest speed attained was 22.2 knots. This speed, if not reduced, will give the builders a bonus of $350,000.

The *personnel* of the navy is to be investigated by a joint commission composed of three members of each House. The commission has been authorized by a joint resolution of both Houses, and has authority to call witnesses, and thoroughly examine the present conditions and needs of the service.

The commission will examine all recommendations and make a report to Congress, recommending some bill for the improvement of the navy on which Congress can take action.

Trials of rapid-fire and machine guns will soon take place before boards appointed by the Army and Navy Ordnance Bureaus. The trial at Sandy Hook by the army is expected to take place during January, while the navy trial is not expected to be held before the 1st of April.

MISCELLANEOUS.

The swords of the Russian cavalry are to be provided with wooden scabbards covered with hardened india-rubber in place of leather. The experiments which have been made show that the new scabbards are not affected by the heat of the sun, frost, or moisture.

The Proposed Canal across Florida.

It is said that the final survey for a ship-canal across Florida will be made shortly. This canal is intended to be about 300 feet wide and deep enough to accommodate the large ships. It will be 150 miles in length, and will

reduce the distance from New Orleans to Liverpool 1000 miles. The Charleston *News* and *Courier* says, "Who is pushing this undertaking is not stated, but it is an interesting and important one. It will shorten the distance from all the chief Atlantic ports to New Orleans as much as from Liverpool to New Orleans. It will make the distance by water from Charleston to New Orleans and Mobile less than from Charleston to New York and Philadelphia. It will revolutionize the commerce of the gulf and add greatly to the business of all the gulf ports. It will make Alabama coal, moreover, nearly as cheap in Charleston as in Mobile, and Western coal and corn and wheat, etc., nearly as cheap in Charleston as in New Orleans."

The Portuguese War Minister has recently published a decree authorizing civilians to practice rifle-shooting at the targets on the ranges at all military stations. The privilege is granted gratuitously to all citizens, subject to certain conditions: the firing regulations of the ranges must be observed, the cartridges used must be paid for, boys under fifteen years and those citizens having physical defects unfitting them to use the rifle will not be allowed to shoot. Arms will be provided by the state.

The instruction imparted will include preliminary exercises, firing up to 600 metres, and special firing exercises.

It is expected that this scheme for rifle practice throughout the civil population will have an important bearing on the defense of the country.

During the recent Austrian manœuvres experiments were made on a large scale with portable asbestos filters, 12,000 of them being supplied to the troops in the field. The filtering power of the fibrous asbestos, which forms the essential part of the apparatus, is renewed by boiling or burning the filtering mass.

L. S. Van Duzer,
Lieutenant U.S.N.

Philip Andrews,
Ensign U.S.N.

SERVICE SALAD.

Lines by Tom Sheridan.

(*From The Athenæum.*)

SHERIDAN'S elder son Tom said many clever things, but he did not strive to make his mark in literature. Some letters from him are preserved among the Sheridan papers at Frampton Court, Dorsetshire, and several verses, which may be read with special interest now, are appended to one of them. They were written towards the end of 1811 or at the beginning of 1812. The subject was the total wreck of a man-of-war, about which the following particulars appeared in the "Annual Register" for 1811:

"Rathmilton, December 6: His Majesty's ship 'Saldanha,' one of our finest frigates, commanded by Captain the Hon. W. Pakenham, brother to the Earl of Longford, sailed from Cork on the 19th of November, to relieve his Majesty's ship 'Endymion' off Lough Swilly. Having reached the harbor, she again sailed on the 30th, with the intention of proceeding to the westward. On the evening of the 4th of December it blew the most dreadful hurricane. At about ten o'clock at night, through the darkness and the storm, a light was seen from the signal-towers, supposed to be on board the 'Saldanha,' passing rapidly up the harbor. When the daylight appeared the ship was discovered to be a complete wreck in Ballyna Stokes-bay. Every one of the three hundred souls on board had perished, and all the circumstances of her calamitous loss had thus perished with her. The bodies of Captain Pakenham and about two hundred of the crew are said to have been washed ashore, and were interred in a neighboring burying-ground."

The late Mr. Richard Brinsley Sheridan, the son of Tom and the squire of Frampton, has written concerning the letter which accompanied the lines, that "it was addressed to Mrs. Mary Moncrieff, of Pitcathley House, Bridge of Earn, when he was in delicate health, and wintering with Lord Ponsonby, at Ventnor, in the Isle of Wight, about the year 1812." The letter runs thus:

VENTNOR, NEW INN, Thursday.

MY DEAR MADAM,—I have taken the liberty of sending you a few stanzas I wrote on the loss of the Saldanha to show you how Ossian has been plundered (though most unconsciously on my part) in another instance, but if you recollect the circumstances attending that ship's wreck, you will see that the image was unavoidably suggested by the facts, & I doubt not Campbell might with justice plead the same reason.—Plagiarism is much oftener involuntary than critics are willing to admit, in this I think you will agree with me. For my own part I am always ready to gather the Flowers I meet with in Poetry, without either turning up my nose at the herbage which may surround them, or imagining too nicely whether they were transplanted or indigenous.—My Vanity will not let me conclude without adding a word or two in behalf of my own offspring.—The perversion of the text of "Rule Britannia" is obvious—my only excuse is that I felt at the moment indignant, at the thoughtless & extravagant sentiment, with which it is so often accompanied.—The lines are of too lawless a character to bear the test of criticism, & I have purposely left them, with many Blemishes, obvious even to myself, rather than pretend to more than I intended, I

think too that compositions of this Description often lose in spirit what they gain by correctness.—They were written from the feelings of the moment & at the moment—so judge of them. I honestly own I like them myself.—Mrs. Sheridan would have paid her respects to you to-day, had the weather permitted, you would have been at no loss to entertain her, as you cannot love Flowers, more than she does.—I beg my best compliments to Mr. Barwis, & remain Dear Madam, your ob^{t} Ser^{t},

THOS. SHERIDAN.

THE SALDANHA.

"Britannia rules the waves"—
Heard'st thou that dreadful roar?
Hark! 'tis bellowed from the caves
Where Lough Swilly's billow raves,
And three hundred British graves
Taint the shore.

No voice of life was there—
'Tis the Dead who raise that cry—
The Dead—who heard no prayer
As they sank in wild despair,
Chaunt in scorn that boastful air
Where they lie.

"Rule Britannia" sung the crew,
When the stout Saldanha sailed,
And her colors as they flew,
Flung the warrior cross to view
Which in battle to subdue
Ne'er had failed.

Bright rose the laughing morn
(That morn which sealed their doom),
Dark and sad is her return,
And the storm-lights faintly burn
As they toss upon her stern
'Mid the gloom.

From the lonely Beacon's height
As the watchmen gazed around,
They saw that flashing light
Drive swift athwart the night,
Yet the wind was fair and right
For the Sound.

But no mortal power shall now
That crew and vessel save—
They are shrouded as they go
In a hurricane of snow,
And the track beneath her prow
Is their grave.

There are spirits of the Deep
Who, when the warrant's given,
Rise raging from their sleep
On rock or mountain steep
Or 'mid thunder clouds that keep
The wrath of Heaven.

High the eddying mists are whirl'd,
As they rear their giant forms,
See! their tempest-flag's unfurl'd,
Fierce they sweep the prostrate world,
And the withering Lightning's hurl'd
Thro' the storms.

O'er Swilly's rocks they soar,
Commissioned watch to keep;
Down, down with thund'ring roar,
The exulting Demons pour;
The Saldanha floats no more
On the deep!

The dreadful 'hest is past;
All is silent as the grave;
One shriek was first and last,
Scarce a death-sob drunk the blast
As sunk her towering mast
'Neath the wave.

"Britannia rules the waves!"
Oh! vain and impious boast;
Go, mark, presumptuous slaves,
Where He who sinks or saves,
Scars the sands with countless graves
Round your coast!

General Halderman's Letters.

(*From the St. Louis Globe-Democrat.*)

General John A. Halderman has made the Smithsonian Institution the perpetual custodian of a rare collection of autograph letters. A period of nearly half a century is covered. The postmarks are from all parts of the world. As soldier, traveler, and diplomat, the General has formed friendships of the most varied character. The letters would fill a book. Many of them are of historical interest. Others are fascinating reading for the light they throw on the private lives of famous writers.

From Windsor Castle, making use of the court stationery, on the delicate sheet with crown stamp at the top of it, the Comte de Paris wrote to General Halder-

man. It was when he was bringing out his account of the battle of Gettysburg. He wished to be perfectly accurate, and he wrote asking General Halderman to go over the ground and verify the statements. General Halderman did so, and the letter given below is the pleasant acknowledgment of the service from the Comte:

"WINDSOR CASTLE, May 14, 1888.

"MY DEAR GENERAL,—I received your kind letter of the 13th of April very punctually at Sheen House (East Sheen, Surrey), which is my present residence in England (being here only for a day on a visit to the queen). But I was so busy after my return in the middle of April, from Portugal, that I could find no time to return my most hearty thanks. I beg to apologize for this delay.

"I was greatly pleased to hear that you had so successfully accomplished your voyage around the world, and that your health had been improved by the life at sea. I congratulate you upon your happy return to your native land, and thank you very much for your kind offer. You will by time have seen my fourth volume of the 'History of the Civil War.' I hope you may have found some interest in perusing it.

"After leaving you in Lisbon I went to spend the New Year with my daughter, the Duchess of Braganze, in her country seat of Villa Vicoza, accompanied my son to Gibraltar, where he embarked for India, and then spent three delicious months with the remainder of my family on my estate in Andalusia, enjoying the finest weather and the best sport I ever met with in my life. Meanwhile my son reached India, where he began by shooting a great many tigers, and now he has joined his regiment at Chakrata, in the Himalaya, where he will spend the whole winter. I read with pleasure the extract of 'Appleton's Cyclopedia' which you joined to your letter. Believe me, dear general,

"Yours truly,
"PHILIPPE, COMTE DE PARIS."

When General Halderman was setting out on his journey to Siam, having been appointed Minister to that country, he visited General Grant, with whom he was on terms of intimacy. General Grant, in the presence of General Halderman, sat at a table and wrote the letter given herewith. There is a passage which possesses much significance in view of the recent aggressions upon Siamese territory.

"GALENA, ILL., May 19, 1880.

"HIS MAJESTY KING OF SIAM,—I take pleasure in presenting General John A. Halderman, who goes to Bangkok as United States Minister to your country. General Halderman, I feel sure, will give great satisfaction to your Majesty and your people. He will have no other object than to preserve the most friendly relations between his own country and countrymen and the government and people of Siam. I am sure if your Majesty should want to consult or advise with him in relation to any matters that might come up you could do so with full assurance of sincere and honest desire on his part to be entirely just and fair towards Siam, While enjoying the hospitalities of your Majesty I thought I saw where impositions had been practiced upon Siam which I do not believe General Halderman would be guilty of and I know his country would not approve of.

"Since my return to the United States I have been a further traveler beyond the borders of my own country. I have had a most delightful visit to Cuba and Mexico.

"I regretted to learn that you had abandoned the idea of visiting the United States this year. Hope you will come yet, even if it should be at a later day.

"With assurance of my high regards, I am, very sincerely,

"Your obedient servant,
"U. S. GRANT."

General Halderman well sustained the indorsement which General Grant gave him. There never was an American diplomat who got on better with the people to whom he was accredited. "Rex Siamensis" became so much attached to General Halderman that, as proof of his esteem, he bestowed upon the United States a palace at Bangkok for legislative purposes. The collection of letters includes several of personal character from the king to General Halderman. One of them reads as follows:

"GRAND PALACE, BANGKOK, November 13, 1882.

"DEAR GENERAL HALDERMAN,—I have your letters of the 3d and of the 9th inst. I am much obliged for the trouble you have taken in these matters.

"With reference to the block of stone intended for Washington Monument and the fishing implements for the Smithsonian Museum, I have directed my private secretary to communicate with you the particulars about it.

"Your Excellency will do me a favor by expressing my appreciation and my sincere thanks to Mr. Hubbard for the valuable and interesting books entitled as 'The Newspaper and Bank Directory' he had sent me through your good offices. I have at the same time directed my private secretary to write and thank Mr. Hubbard himself. Believe me,

"Your Excellency's good friend,
"CHULACNHORN, R. S."

To HIS EXCELLENCY, GENERAL JOHN A. HALDERMAN, United States Minister.

As a reminiscence of court life at Bangkok, General Halderman has preserved the following invitation from one of the highest nobility of Siam:

"BANGKOK, January 1, 1881.

"DEAR SIR,—Will you do me the pleasure to tiffin with me to-morrow at 1 o'clock P.M., to meet Mr. and Mrs. Sickles and other American gentlemen?

"Yours sincerely,

"BHARKARAWONGSE.

"White Jacket."

White Jacket means the *costume de rigueur* of Bangkok, a great improvement, for that climate, on swallow-tails.

One of the strangest commissions ever given an American Minister was that set forth in the following letter to General Halderman while in Siam:

"WALDEMERE, BRIDGEPORT, CONN., October 24, 1882.

"MY DEAR AMERICAN MINISTER,—We have not got the white elephant from the place where we had reason to believe we could get it, so we are still open for a trade. If a good specimen can be obtained I will give the terms before offered, and, besides, I will allow you five thousand dollars a year for whatever time we may exhibit it, not exceeding five years. I write in haste. I can furnish ample evidence of the responsibility of my managers and myself, and, if necessary, can supply security that we will return the animals after two or three years, as it may be required. I expect that my agent, Mr. J. G. Gaylord, may call on you soon. He is now on his way to Australia, Japan, and China, gathering in specimens of the uncivilized tribes and curiosities (living) of all kinds. As De Witt Clinton Wheeler has exposed my efforts to get this animal, and it has been published, and as he has done me no good whatever, I prefer to pay him nothing, but to pay you, or your agents or assistants, all that I have proposed to pay at all.

"Very truly yours,

"P. T. BARNUM.

"See next page.

"P.S.—It would be a grand idea to have some Buddhist priests to come with the animal and preach Buddhism, circulate their tracts (printed here), and thus spread their doctrine. All such accompaniments would help. I expect to see Professor Baird, of the Smithsonian Institution, and send you an indorsement from him. If the animal can not be given or leased to a private individual, I suppose I can, at great trouble and sacrifice, arrange with the Smithsonian or a public zoological garden to take it and loan it to me. But it is better for Siam that it be taken, as I should take it, to all parts of the United States. Your predecessor, Sickles, took from me my autobiography, various photographs, and an autograph letter from me to the king, agreeing to send them. I would like to learn whether he ever did so.

"P. T. BARNUM."

General Halderman protested at such an invasion of the business instinct into diplomacy. He tried to show Mr. Barnum that the collection of curiosities for the greatest show on earth was not a legitimate duty for an American Minister. The showman was set on getting a second white elephant. He even went to President Arthur about it. The President was vastly amused. He said that Halderman could get it if any one could. And so Barnum continued to press his proposition, raising his figures and refusing to see the impossibility of the thing.

General Halderman got his initiation into politics during the border troubles of Kansas. One of his epistolary curiosities is a letter from the first delegate to Congress from the Territory of Kansas:

"WASHINGTON, December 28, 1855.

"MY DEAR HALDERMAN,—I have delayed writing, hoping to say something definite. As yet all is doubt and uncertainty. I think Banks will ultimately be elected Speaker. If so, I will have a hard committee to get along with. My case was prejudged before Congress met, and if the hounds could have had a chance at me the first week, I would have been overboard certain. Now they will find Jordan a hard road to travel. The worst thing they can do will be to send the election back. If they do that I will give the Esqs. hell.

"Will you do me the favor to-day to the good people of Delaware City to send me an application for post-office at that place. They certainly are the modest sort of people who live there. I don't know who they want for postmaster. I shall be pleased to hear from you.

"Yours truly,

"J. W. WHITFIELD."

One of the first official positions held by General Halderman was that of secretary to Governor Andrew H. Reeder, of the Territory of Kansas. In that position it became his duty to save the governor from assassination. The incident was so long ago that it had almost escaped General Halderman's memory, when a letter from F. G. Adams, Secretary of the Kansas Historical Society, brought it back. Mr. Adams wrote,—

"I stopped at Easton, Pennsylvania, and had a very long talk with Judge Howard and General Frank Reeder, sons of Governor Andrew Reeder. In my conversation Judge Reeder inquired of your whereabouts and of your welfare. He expressed a very friendly interest in you, and gave as the reason the great services

rendered by you to his father. He showed me the journal kept by his father about the time of his leaving Kansas in the spring of 1856, in disguise. The journal shows that it had at first been the purpose of the governor to submit to an arrest under an indictment which had been found against him. Further on the journal shows a most positive determination not to submit to such an arrest, in the belief that assassination would follow. Judge Reeder said that his father often told his family that it was information received from you that led to his decision not to be arrested. He always believed he would have been in imminent risk of assassination if he had fallen into the hands of the excited men at Lecompton at that time, and that you saved him from that fate."

Then General Halderman recalled a certain moonlight night, a camp near the town, an impending crisis in Kansas politics, an intimation through secret sources of the plan of the opposition. He insisted on sudden departure. The governor demurred at first, but yielded, and when morning came was far away and safe.

W. B. S.

"*Pears' Pictorial*—think of it! Who has not heard of Pears' soap—the mighty, the unsurpassable, the inimitable Pears; name synonymous with art in advertising, art in soap-making, and now art in journalism? A great pictorial so cleverly divided between interpreting art for art's sake and winning your love for Pears' soap, that one really appreciates the novel sensation. The supplements are superb." —*Turf, Field, and Farm*, December 29, 1893.

One of the daintiest of the New Year calendars is that issued by the proprietors of Hood's Sarsaparilla. It will fully satisfy every expectation as to beauty and utility. "Sweet Sixteen" is the head of a beautiful girl, the lovely picture being lithographed in many delicate colors. The pad harmonizes with the exquisite array of color above, while the dates are easily read. Hood's Calendar may be obtained of your druggist or by sending 6 cents in stamps for one, or 10 cents for two, to C. I. Hood & Co., Lowell, Mass.

"Mr. Kris Kringle," by Dr. S. Weir Mitchell, is a pathetic little tale of Christmas-eve that may be enjoyed by old and young alike. The binding is one of the daintiest of the year, and the illustrations are especially good. The publishers are George W. Jacobs & Co., 103 South Fifteenth Street, Philadelphia. The book is sold at fifty cents a copy, for the benefit of the Home of the Merciful Saviour for Crippled Children, Philadelphia.

Why He expended the Soap.

(*From Quarterly of United States Cavalry Association*, March, 1893.)

I RESIDE at Fort Apache, and my name is Truthful James,
I am not up to small deceit, or any sinful games,
And I'll tell in simple language, as I've often told before,
About Lieutenant Buster and the Second Auditor.

But first I would remark that it's not a proper plan
For the Auditor to set his clerks to going for a man;
And if a fellow's trying hard to do the best he knows,
He shouldn't snap a fellow up, at least so I suppose.

Now, Buster he was commissary at this here foreign post,—
He was adjutant and A. Q. M., and also used to boast
That "he always drilled his company," which made it mighty hard
For him to look at everything the days he went on guard.

He only had one detailed man to do official writing,
And the questions he was called to solve were often quite exciting.
He was asked to write "A history of the Indians there existing,"
And to give his observations on the "facilities for subsisting."

He had to fill inspection blanks, make sanitary rules,
And give active supervision to the lyceums and schools;

He also had to make report should any man desert,
And the causes for this breach of faith in full he must assert.

Now, Buster was an active man, of this there's no disputing,
So they added to his other jobs the duty of recruiting.
He only once gave vent to oaths, and this was at a hop,
When he said that "since he'd run the band he'd like to shut up shop."

Now, nothing could be finer or more beautiful to see
Than the first month's correspondence of this energetic bee,
Till the sergeant brought attention to a shortage he had found
In the quantity of issue soap, of which he'd lost a pound.

Then Buster smiled a bitter smile, and said the "only way to do
Was to put his fingers in his pants and put up what was due."
But the sergeant of "exparience" had another way to end it,
And suggested to the "lootinant" that he had best "expind" it.

So the papers went to Washington for due examination,
And soon a letter did arrive requiring explanation,
Which required "the necessity, the reason, and the right"
For the unusual expenditure of which they had caught sight.

Now, it's not considered proper for a military gent
To say an auditor's an ass—to any great extent;
But when he's called on for remark, must make out a defense,
Just as if he thought the question was not destitute of sense.

So Buster wrote a letter, in which he expressed with pain,
That it mortified him deeply to be called on to explain—
That he attended to his duties, and he had no time for capers,
And expended that one pound of soap "so as to clean his papers."

An Original Idea.

The acme of perfection in cocktails is seldom reached. Hurriedly prepared and served before the liquids have been well blended (a process requiring days to accomplish), they have, in spite of these drawbacks, attained the front rank as the typical American drink.

The Club Cocktails, put up in quart bottles, made of the purest of liquors, thoroughly well blended, and far superior to any made, either at home or at the bar, are fast superseding all other kinds.

They are prepared in six styles,—Martini, Whisky, Manhattan, Tom and Holland Gin, and Vermouth. They cannot fail to suit all tastes.

Always ready, and so mixed as to afford the most delightful combinations, wonderfully palatable and refreshing, the advantage of being able at a moment's notice to obtain an unequaled cocktail is unquestioned, and the unprecedented demand for the Club Cocktails proves conclusively how happy was this idea, which originated with Messrs. Hueblein & Bro., of Hartford, Connecticut.

Four bottles of your selection will be sent, charges prepaid, on receipt of $6.00; but all first-class dealers keep them or can obtain them for you.

So great has been the demand for this, a purely American enterprise, that a branch office has been established in the heart of London, and the results have surpassed the most sanguine expectations.

Connoisseurs in fine liquors should order a few bottles of these cocktails, which they will find delicious, appetizing, and excelling anything of the kind hitherto introduced.

HEALTHY FLESH

is a storehouse of latent vital strength which comes to the rescue in time of need. Losing flesh shows that there is a demand made for vital energy. Something is wrong.

Scott's Emulsion

the Cream of Cod-liver Oil and Hypophosphites, gives the system the nourishment it requires, and thus restores a normal condition. Thin, angular women need it. *Physicians,* **the world over, endorse it.**

Coughs and Colds,

Throat and Lung Troubles, Blood Diseases and Emaciation—all give way to Scott's Emulsion.

Don't be Deceived by Substitutes!

Prepared by SCOTT & BOWNE, Chemists, New-York City. Druggists sell it.

The Crèche at the World's Fair.

BOARD OF LADY MANAGERS,
WORLD'S COLUMBIAN EXPOSITION,
WOMAN'S BUILDING,
JACKSON PARK,

CHICAGO, ILL., U. S. A., Oct. 14, 1893.

To The Doliber-Goodale Co., Boston, Mass.

MELLIN'S FOOD is used in the Children's Building at the World's Fair, for feeding infants that are left at the Crèche. No other Infant's Food is used. After a fair trial of the other Foods, I find MELLIN'S FOOD gives the best satisfaction. I confidently recommend it to all mothers.

(Miss) Mayzie Hall.

Matron of the Crèche and Day Nursery Exhibit,
World's Fair, Chicago, and of the Virginia Day Nursery, New York City.

Mellin's Food Received the Highest Award at The World's Fair, Chicago.

MILITARY ORDER OF THE LOYAL LEGION OF THE UNITED STATES.

Companions of the Loyal Legion are invited to contribute to this department. News of the Commanderies is always welcome, but suggestions likely to inure to the benefit of the whole organization are of higher value, and therefore particularly desired. The pages of the Loyal Legion Department of the "United Service" are always at the service of members of the Order desiring to discuss matters of general interest to their comrades of the Military Order of the Loyal Legion.

Illinois Commandery.

Stated meeting held December 14, 1893.

To THE FIRST CLASS.—Lieutenant Edwin T. Babcock.

To THE SECOND CLASS.—Mr. Alexander F. Stevenson.

District of Columbia Commandery.

Stated meeting held January 3, 1894.

To THE FIRST CLASS.—Colonel Thos. McKee Bayne, U.S.V.; Colonel Wm. Pitt Kellogg, U.S.V.; Brevet Major Chas. Edward Mallam, U.S.V.; Major John Wesley Powell, U.S.V.; Assistant Surgeon George Thompson Ribble, U.S.V.

To THE FIRST CLASS (by inheritance from deceased officer).—Mr. William Andrew Boyd, Mr. Thomas Ewing Moore.

Michigan Commandery.

Stated meeting held January 4, 1894.

To THE FIRST CLASS.—Brevet Lieutenant-Colonel Rufus W. Jacklin, U.S.V.; Lieutenant Simon H. Kitchel, U.S.V.

To THE SECOND CLASS.—Norman W. Fox.

Minnesota Commandery.

Stated meeting held January 9, 1894.

To THE FIRST CLASS.—Lieutenant John F. Perry, U.S.V.

To THE FIRST CLASS (by inheritance).—Harry A. Tomlinson.

Iowa Commandery.

Stated meeting held January 9, 1894.

To THE FIRST CLASS.—Captain Thos. Seely, U.S.V.; Major Wm. G. Thompson, U.S.V.; Lieutenant John F. Bishop, U.S.V.

Indiana Commandery.

Stated meeting held December 19, 1893.

To THE FIRST CLASS.—Captain A. H. McDougall, U.S.V.; Captain S. Fortner, U.S.V.; Captain Milton Garrigues, U.S.V.; Captain Aaron McFeely, U.S.V.

To THE SECOND CLASS.—Thos. Lutz Still.

TRANSFERS.

California Commandery.

Captain Chas. Porter, U.S.A., Captain Fred. Fuger, U.S.A., and Chief Engineer Harris Webster, U.S.N., to District of Columbia Commandery.

Minnesota Commandery.

Colonel Chas. H. Alden, U.S.A., and Lieutenant-Colonel Merritt Barber, U.S.A., to District of Columbia Commandery.

Kansas Commandery.

Captain Peter Leary, Jr., U.S.A., to District of Columbia Commandery.

District of Columbia Commandery.

Colonel C. C. Byrne, U.S.A., to Minnesota Commandery, and Captain W. M. Meredith, U.S.A., to Illinois Commandery.